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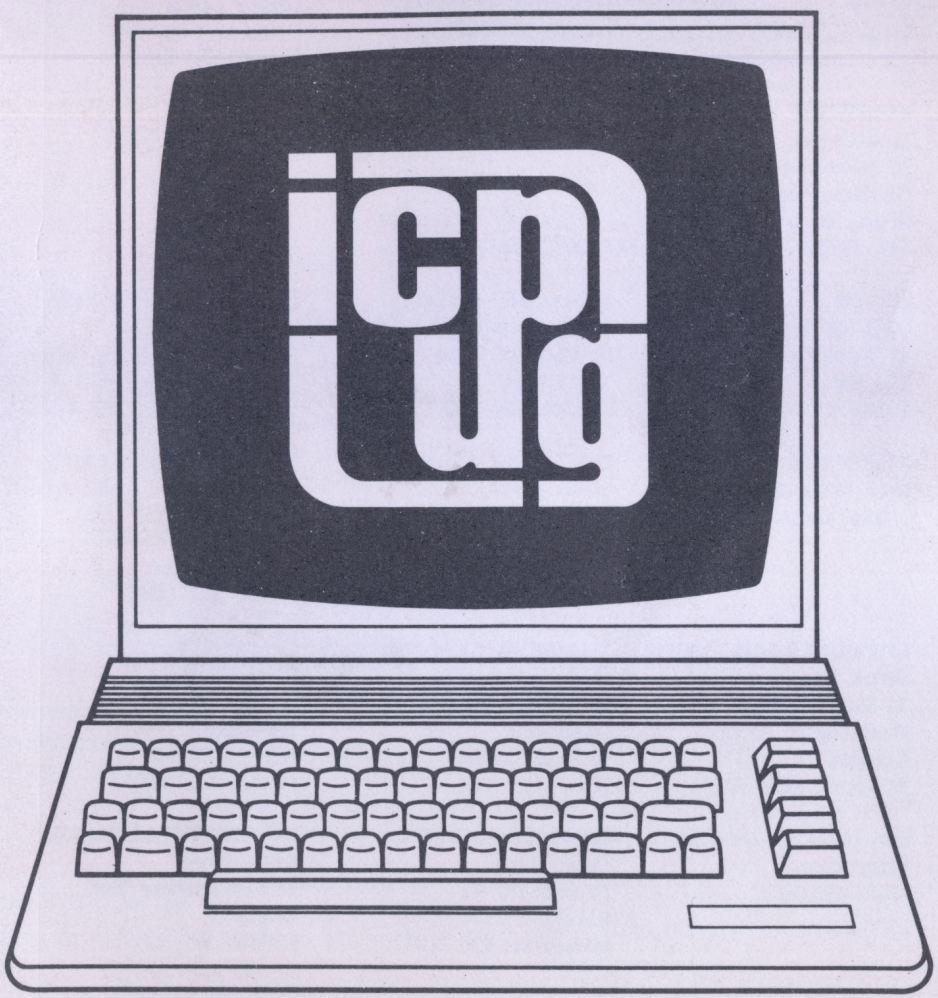

Europe's first independent magazine for CBM users

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newsletter

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EDITORS' NOTEBOOK

Two weeks ago there didn't look to be enough copy to put an issue together, even with Mike Todd's remarkably detailed 1986 directory, for the work that has gone into which we owe him a lot. Events conspired, however, to delay make-up day a fortnight, and within that short time our problem changed completely to being knee-deep - well, ankle-deep - in copy and needing to take decisions, decisions (Henry takes these) whom to hold over. There is a lesson in this little story: the next issue comes round awfully quickly, and once you receive this one, there is surprisingly little time for you to grab your keyboard and punch out that article you have been gestating for months or to protest at the rubbish Bill Whosit wrote in this one.

And while on the subject of that article you just haven't quite got round to sending us, we have heard moans that the Amiga is taking over the Newsletter, and there are not enough articles about the KIM, the 2008, or the abacus. Let's get the record straight: as you can see from the preceding paragraph, the Editors are in the hands, largely, of the contributors, and if it is the Amiga buffs who send the stuff in, then there is going to be a lot about the Amiga in the Newsletter. Those who feel there should be more about other things have the remedy more or less in their own hands - get writing. This issue certainly has a counter-attack by the unAmigate.

We start 1987 - a year that looks already certain to break all membership records, to judge from the January renewal rate - with the Newsletter in its new cover. Judging the cover competition and deciding what to use for the new cover has been quite difficult. There were very Commodoreish designs we did not feel were sufficiently artistic; there were very artistic designs we did not feel were sufficiently Commodoreish/ICPUGGY; and while we wanted to get away from pixies, we did want some thread of continuity. No choice would have pleased everyone, but we hope that at least a significant minority will approve.

The light-hearted reference in the last Notebook to upgrading our production process to page make-up on screen on an Amiga and printout on a laser printer has had unexpected results in the form of a Committee decision to provide the Editors with new software on the 128 and a laser printer. In an issue or two, therefore, when we have come to grips with all this new technology, you may expect an internal facelift as well.

HdeG
HGV

REVIEW—VIZASTAR

by Jim Kennedy

VizaStar is a spreadsheet. I won't go into the details of what a spreadsheet is or what it can do, as most readers will already know about these things. For those that don't, you could start by reading Brian Wise's review of Swiftcalc 128 in the Nov/Dec 86 Newsletter.

Spreadsheets have been inextricably linked with microcomputers since Visicalc first appeared for the Apple II some years ago. Visicalc was the first business application program for micros and it opened the eyes of thousands of people to the usefulness of a microcomputer. Apple sold countless machines just because Visicalc was around. Multiplan was the next spreadsheet to come along, followed by Lotus 1-2-3, each with increasingly sophisticated facilities. Word processing and database programs were also being developed for micros at this time but most historians credit the spreadsheet with having started the business micro ball rolling.

Back in 1967, long before the micro revolution started, I started messing about with computers by solving scientific equations using FORTRAN IV on an IBM 360 mainframe. I continued working with mainframes off and on until the VIC 20 came out. I bought one and when I got tired of Emmet Attack, became involved with database programs in my attempts to do something useful with the beast. Next I acquired a C64, moved up to Superbase and along the way developed some database files which involved multiple screens and many calculation fields. After a while I thought, 'Right, I must get a spreadsheet and use it rather than avoiding the issue with a database and all these calculation fields'. So I bought Microsoft Multiplan. It worked, but the command syntax was awkward and the manual, while over 400 pages in length, was not all that helpful and seemed to be designed to encourage the average business user to enroll in a Multiplan training course of some type. It also had one small bug, in that it would not allow both upper and lower case letters on the Commodore DPS1101 printer; I believe it was Brian Grainger who pointed out that Microsoft choose the wrong Commodore 64 character set to be used when printing!

It served my purposes, however, keeping of a set of accounts by month with currency exchanges, share prices and the like for me, but I kept telling myself there had to be a better way. I didn't enjoy using Multiplan and my accounts were updated usually on a quarterly rather than the weekly basis as I had planned. I tried other spreadsheets,

some better and some worse than Multiplan, but nothing really made me excited. Then recently I obtained VizaStar for the 128. I am now happy; I have found the better way!

Speed

First let us talk about speed and benchmarks for spreadsheets. Multiplan took what seemed eternity to recalculate the spreadsheet whenever a change was made in a cell. During recalculations it displayed messages like '444 cells to go', then five seconds later '356 cells to go' and so on until the job was done. VizaStar, on the other hand, seemed to do it in a flash. A more scientific comparison was needed. I went over to my collection of past issues of 'BYTE' magazine and pulled down the March 86 issue which reviewed the Kaypro 286i computer, an IBM AT clone recommended to sell at $4450 (around £3200) with 512K bytes RAM but discounted to around $3000 (approx £2200). The 'BYTE' article listed the spreadsheet recalculate benchmark for the Kaypro 286i as 4.1 sec, the IBM PC as 11 sec, and the Apple IIe as 22 sec. These were obtained using a 25x25 cell spreadsheet where each cell equals 1.001 x the cell to its left, running Microsoft Multiplan. I entered this benchmark standard in VizaStar on my 128. The result was an astonishing 5.1 sec! To be beaten by one second by an 80286 machine is no disgrace. Of course some wags would say to beat an IBM PC is no great feat but still, VizaStar was more than twice as fast as the PC. Now you can begin to see why the PC crowd are clamouring for the 80286 and maths co-processors in their IBMs and its clones. But the real reason for the speed on the 128 has little to do with the hardware. The reason lies within the spreadsheet software and specifically in the maths routines. The old 6502, even in its new 8502 clothing, is nowhere as near as fast as the newer 80286 chips. Someone who really knew their programming stuff designed VizaStar.

I asked Kelvin Lacy, the author of VizaStar, about its amazing speed, and he let the cat out of the bag; Mick Bignell of Microport helped to write the VizaStar recalculation routines along with its stunning multiple skyscraper bar graph facility. For those of you who don't know him, Mick Bignell is the only person I will allow to repair my disk drives. He is so busy he doesn't like to work on other items of equipment but I occasionally manage to talk him into repairing them. Mick knows his hardware inside out; his prices are reasonable; integrity is his byword. Most of the other people in the world of Commodore computers whom I respect for their knowledge and programming abilities feel the same as I do and go to Mick when they have a

hardware problem. Anyway, I found out why VizaStar is so fast.

I should have mentioned that Multiplan makes recalculation of the whole spreadsheet their default condition which has to be switched to 'off' in order to allow reasonably rapid entry of many new values followed by recalculation at the end; to do otherwise is painfully slow. The irony is that the much faster VizaStar has an opposite default condition of 'off' switchable to 'on' if desired. In fact with VizaStar, unless you are very fast on the keyboard or have a very large spreadsheet in memory, you would probably be happy setting the recalculate facility to 'on': you would hardly notice any delay when entering updated figures into various cells.

Menu-driven

Using VizaStar is somewhat like Lotus 1-2-3 or Superscript - a menu appears at the top of the screen inviting selections by moving a highlighted bar along with the cursor keys or space bar and pressing Retum, or alternatively by pressing the key corresponding to the first letter of the option text, e.g. 'L' for Load. Various menu options have submenus and some of these request one to enter information from the keyboard, such as the range of cells to be used in a calculation (e.g. D3:D15 which means cells D3 thru to and including D15 in standard spreadsheet notation).

Functions

The list of functions available for use in cell formulae is extensive. Included are all the trigonometric, maths, and logical functions along with some for dates. These features, although differing slightly from one spreadsheet to another, are not what sets VizaStar apart from the rest of the world. The exceptional VizaStar features lie in four other areas. These are 1) the EXECution lists or macro commands; 2) the DATAbase management system that sits alongside the spreadsheet to contain data best stored in flat-file database form; 3) the stunning graphics, particularly the multicoloured multibar skyscraper graphs; and 4) the instant access to the printer options settings. I'll mention each of these four points briefly.

EXEC lists

First the EXECute lists command. This allows you to insert into as many cells as you like characters corresponding to what you would normally enter at the keyboard. You then press F8 to start EXECuting the commands and VizaStar executes those commands as long as it keeps

finding more commands in successive cells. Branching based on IF . . . THEN GOTO is allowed, meaning lots of stunning feats are possible for those who like to save time by making the machine do the work.

DATAbase

The database with its DATA command allows database files to be created with each column being a field ranging from A through to BL with a maximum field length of 120 characters. Field A is the key field and the others may be in General, Integer, Currency, Date or Scientific format and formulae are allowed. The range of things one may do with VizaStar as a database is quite reasonable and although I have not had a chance to try all the options I would rate it, as an 8-bit database, as equal to or better than all others except Superbase.

Graphics

The graphics allow three types of charts: bar, multibar, and pie. Bar charts are just what their name implies and are displayed in a window based on the contents of a range of cells specified. They are in the same colour as the spreadsheet. The multibar and pie charts are in colour. The pie chart may contain up to 12 numbers from the sheet and the numbers along with descriptive text are also displayed outside the 'pie'. The multibar charts are the most stunning, however. They may be composed of from 33 cells in one row to 13 cells in four rows, displayed in one of the most professional bits of graphic display I've seen on any micro. I didn't know my monitor was capable of such beautiful graphics. It makes me wish I had a colour printer.

Printer options

The printer options are called up in a pull-down menu that lists all the parameters as they were last set. These are automatically saved to disk with the rest of the spreadsheet, so unless one has more than one printer for the same spreadsheet it won't require many changes. Listing all the parameters in a separate window and allowing any of them to be changed while viewing the others is a very good idea. Things like top and bottom margin and page length make more sense in relation to each other rather than changing each one separately when you have forgotten how the others are set. Most printers, whether Commodore, RS-232 or parallel connected through an interface are catered for.

I was able to make the Sideways print utility from Timeware Ltd work with VizaStar. I mention this because I rang Viza Software a few months ago and asked them if Sideways would work with VizaStar, and they said

it wouldn't but they were thinking about adding it. Those of you with very wide spreadsheets and 80-column dot matrix printers will find Sideways useful. But VizaStar works very well with my DPS 1101 printer - by using a 15-pitch, giving 165 columns on wide paper, I can manage my annual accounts with 12 monthly sets of figures.

As you have probably realised by now, I am not covering any of the usual spreadsheet facilities in this article. There is really no reason to list all the various things like the DATE functions which include DAY, MONTH, YEAR and TODAY options or the MIN, MAX, SUM, SQRT (square root), LOG, ABS, TAN, ATN, SIN, COS, ABS, COUNT, EXP, LOG, INT, ROUND options which are, or should be, in all spreadsheets worthy of the name. VizaStar has them, as well as some which tend to be omitted from others such as ERR, ISERR and ISNA for Boolean logic operations as well as LOOKUP options which allow one to look up values from another portion of the spreadsheet either in column or row format. It has the complete spectrum of cell formats and allows a single cell to contain up to 120 characters just like the database although only a maximum of 75 may be displayed on the screen. I can't see many people wanting spreadsheet features that are not contained in VizaStar. A call to Viza Software Ltd at their new Maidstone offices on 678169 should obtain an answer to any questions a reader with unusual requirements may have. I'd be very surprised if they find a facility absent from VizaStar that is present in another spreadsheet on the 128 or any other 8-bit micro.

The price one pays for all these facilities is surprisingly small. Usually, the more powerful the package the harder it is to learn and remember the commands. With VizaStar most are available from the menu at the top of the screen. The manual will be needed for setting up a new spreadsheet or to add to existing ones when the more specialized functions are required and when EXEC commands are being entered, but it is clearly written, well laid out, and easy to use.

VizaStar comes on a cartridge and disk. The disk may be copied but you must do a Block Allocate to track 1, sectors 0, 1 and 2 of the copy to prevent a file from overwriting the boot routine if you wish to have both the VizaStar program and its data files on the same disk. If you don't know about the Block Allocate, command then use a separate disk for your spreadsheet data. VizaStar is listed with a recommended retail price of £129.95 but widely discounted to around £99.95. This makes it the most expensive spreadsheet package around for the Commodore 128, but one must take into account that this price includes the database

functions if making comparisons. Of course, I would love to see it priced somewhat lower, and I feel that if it were then it would wipe out the rest of the spreadsheet market along with a sizeable portion of the database market as well. On the other hand, it really is the Rolls Royce of the spreadsheets, so one shouldn't complain too loudly about the price. Maybe a good test of value for money on any software package is to ask oneself the question, 'Would I sell this package for the price I paid for it if no replacement was available for purchase?' In this case my answer has to be 'No'. Having used other spreadsheets previously and not wishing to give up VizaStar I wouldn't sell my copy of VizaStar for even double its retail price unless I could be assured of being able to purchase a replacement copy. It is available through our Discounts Officer and members should ring him for the latest ICPUG discount price.

--oOo--

THE DEVIL'S DICTIONARY

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ARTIFICIAL INTELLIGENCE	A man-made method for making a computer even more irrational than a man.
BACKING-UP	Mythical ceremony, often discussed but rarely encountered.
EXPERT SYSTEM	Program that duplicates your mistakes, only faster.
HARD DISK	Device enabling naive computer users to lose vast amounts of data quickly and easily.
HOUSEKEEPING	Just like the real thing, doesn't get done.
LOCAL AREA NETWORK	Electronic means of allowing multiple users to destroy data files simultaneously.
NATURAL LANGUAGE	Like no other language anyone's ever heard of.
SECURITY COPY	Imaginary duplicate that everyone assumed was made by somebody else.
SHADES OF GREY	Shades of green.

--oOo--

DESIGN AND HISTORY OF THE C64

by Robin Harvey

In 1985, the IEEE published in their Spectrum publication an article describing the design history of the Commodore 64 computer. It presents an interesting insight into how such a project starts in the first place and the various modifications that have to be made during development and indeed during production. The article is candid and details some of the design problems associated with the C64's history.

It all started in January 1981 when a group of designers working at MOS Technology (owned by Commodore) set out to design a graphic and sound chip to sell to the video game industry. Nine months later the design was complete and Jack Tramiel, the Commodore boss, decided that the chips should be incorporated into a computer with 64K of memory. The design process took less than three months and they were then able to build five prototype computers, incorporating the new chips, and display them at the Consumer Electronics Show at Las Vegas in January 1982. They were the first Commodore 64 computers and they became the stars of the show with their remarkable price tag of $595. Thus in one year, what set out to be a chip-marketing exercise turned into a full-blooded computer product that was to set the world on fire.

By August 1982 the C64 was in full production and has run unabated more or less ever since. What is interesting is that the production cost of the C64 was set at $135 and then designed to that price rather than to a specification and then seeing what it would cost.

The transition from prototype to full production did not go smoothly despite the short timescale. Certain modifications to the prototypes were made but often created as many problems as they solved and, in retrospect, the designers wondered whether they should have foregone the modifications and gone into full production even earlier. Some problems were nevertheless ignored until well into production including the re-routeing of the sound output printed circuit track which was too close to the video track giving an annoying 15,750Hz whine on the sound output. This applied to US machines but it is not clear whether this problem manifested itself on UK machines.

The decision to use an RF modulator costing $3 on the C64 gives an interesting insight into production engineering. One school of thought says that it's a cut-down in quality on the originally specified one costing about $6.50, while others say that it's a vast improvement over the one used on the VIC 20 which only cost 50 cents!

It's perhaps not too surprising to note that even manufacture caused problems, with the United States production plants using component automated insertion techniques but the Japanese plant not. The problem is that each technique requires a different printed circuit board layout and different components. In the end the Japanese operation was transferred to Hong Kong where an automated plant was used.

Some early owners of C64s may remember the so called 'sparkle' problem which caused small spots of light to appear on the display screen. Originally the video chip attracted all the blame for this unwanted feature, but at the end of the day a ROM chip was discovered to be the culprit. As well over 3 million of these were already in use in arcade games etc, it was hard to recognise this as the cause. In the C64, the system bus is shared between the 6510 processor and the video circuitry and when control was switched between them, voltage spikes were occasionally generated. These were due to a special pre-charging circuit in the ROM designed to make it work faster. The spike was detected as an address and consequently fed the video chip with wrong data. What really did the damage from the user's view, was that this sparkle affected the sprite collision sensing and caused the movement of objects on the screen to go wild.

One interesting effect that literally came to light during production, was due to the enthusiasm of some production workers who decided that whilst testing the C64, it would be easier to tum a potentiometer fully clockwise rather than adjust it properly. The result was that some machines were delivered with very garish colour displays and virtually no contrast between black and white.

A lot of comments were being made by reviewers and the general public about C64 quality control, with testing in the factory having clearly been limited. The reason for this was that while the machine as an individual entity was tested, its control over peripherals, like disk drives, was not. Therefore a broken PC track caused by over-zealous use of a power screwdriver, would not show up if the tracks were associated with extemal peripherals.

Perhaps the greatest criticism of the C64 was the crude BASIC and its lack of commands to handle the sound and graphic features, but any enhancements over and aove what was actually provided would have placed extra demands for ROM space that would have exceeded the price they were working to. A more interesting explanation is that 'Mr Commodore', Jack Tramiel, was a hardware man and anything he could not hold, touch or feèl was not worth spending money on. Another early casualty was a plan to re-package the C64 in a new less stubby case, but the idea

prevailing at the time was that as the machine was selling well, why change it?

There are many characteristics of the C64 that have attracted praise and indeed criticism but the most prolific gripes have without doubt been the slowness of the associated 1541 disk drive. The reason is historical. When the VIC20 came out with its disk drive, it was based on the disk operating system developed for the PET, changed from parallel to serial operation for reasons of economy. Because the serial interface portion of the VIC 6522 interface controller did not work, a different approach was used where the 6502 processor sent out a bit at a time under software control. Under ideal circumstances, a byte at a time would be sent to the peripheral controller. Now, when the C64 came along, the part of the interface controller was made to work and it could have resulted in a fast disk drive. Incredibly, it was decreed that the C64 had to remain compatible with the VIC20 disk drive and so the VIC compromise remained, but to compound the agony, the disk drive was slowed down even further so that the processor in the C64 could catch the disk drive interrupt signals. So it all stemmed from the original VIC20 6522 interface controller not working correctly and an insistence that the 1541 remain compatible with the VIC20 system. At the end of the day it wasn't anyway!.

The deficiency in the disk drive performance has given rise to another growth industry; making so-called disk turbo modifications. One from Epyx, for example, will enhance the normal C64-to-disk transfer rate of about 512 bytes per second to 2.5 Kbytes per second.

The article provides an interesting peep into manufacturing costs, with the original C64 estimated as costing about $135 to make and retailing at $595. Today the retail price is about $149 with production costs thought to be between $35 and $50.

Even now there are thought to be some problems with the C64, resulting mainly from the cost-cutting exercises. Dissipation of heat from the 6567 video chip remains a problem, perhaps due to its change from ceramic to plastic. Apparently the chip can lock-up when a program switches to graphics mode. Another problem is that some C64s have faulty horizontal scrolling of bit-mapped screens. A recent reviewer commented on the flash-bulb feature in the swimming event of Summer Games. It's not a feature but faulty horizontal scrolling!

Nevertheless the C64 has been a phenomenal success world-wide and no doubt kept Commodore going for a few years in a fiercely competitive market. Let's hope that Commodore can maintain the initiative.

--oOo--

SUPERSOFT FOR PET....

We have a large quantity of PET equipment, including such unusual items as the SuperPET 9000, 9060 and 9090 disk drives, and the 700. Of course we also have more common machines such as the 4032,8032, 8096, 4040, 8050 and 8250.

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PLUS 4 SPECIAL

by Richard G Hunt

(Or to continue the burgeoning alliterative tradition - Richard's Rubbish . . .)

The article by Mike Hatt in the last issue on the Plus 4 and word processing has prompted me to give utterance especially for the ICPUG magazine. This is unusual because most of my material goes to the South East mag. However I am sure that the Editor (SE) will forgive me my disloyalty.

A couple of issues ago in the SE mag I described how to save text to tape from the 3+1 wordprocessor. Plus 4 owners will know that there are no resident commands to do this, thereby making the WP far more defective than it need have been. Some deficiencies can be made up however by useful features of the Plus 4 itself. The article described a set of procedures which I reproduce below:

The 3+1 WP stores its text in high RAM starting at around $C12C for a maximum of 77*99 bytes (99 rows of 77 columns). Knowing this enables the cunning to save to tape that area of memory as a program file, using the built in monitor (Tedmon):

1. First enter 3+1 WP and create the text. When ready to save, move to the spreadsheet by entering the command TC (on the command line, of course).

2. Reset the Plus 4 from the spreadsheet by pressing the reset button and simultaneously holding down the RUN/STOP key. This both retains the 3+1 environment and drops the machine into the Tedmon monitor. The area of RAM in which we are interested remains unaffected.

3. Ensure high RAM can be read by Tedmon by writing #$80 at location $07F8. This is best achieved by displaying memory at $07F8 with the M command (M07F8 <retum>), and by overtyping the first byte displayed with 80 (and don't forget to press <retum>!).

4. Check memory at $C100 (again using the M command). Remember that the 3+1 WP uses CBM screen codes not ASCII so the hex and ASCII dumps will be meaningless unless you have deliberately placed a number at the beginning of text, e.g. a margin setting, which will be recognisable. Find the end of text in the same manner by dumping memory. The change from text to unused memory should be obvious. Otherwise take the end address as the maximum possible number of bytes: $DEF3 should be

sufficient. Note down the end address and add one byte to it for good measure (and because the Save command requires the extra byte!).

5. Save the desired area of memory thus: S,"PROGNAME",1,C12C,NNNN <return> - where NNNN is DEF3 or the end address found in 4. above.

6. Exit the monitor by typing the X command and press <return> TWICE. This will drop you back in the spreadsheet, whence a simple command TW will return you to the WP for further word processing.

The process can be reversed for loading from tape thus:

1. Enter the 3+1 WP as normal and go to the spreadsheet as in 1. above.

2. Reset as in 2. above.

3. Carry out procedure 3. above, if necessary.

4. Load the file from tape thus: L"PROGNAME" <return>

5. Return to the WP as in 6. above and the text should be visible for editing, printing etc.

I describe these procedures in some detail so that I may take issue with Mike Hatt on one point. His table of compatibility for WPs indicates that files created in Script/Plus are 'no good' to 3+1. This is almost true, because Script/Plus writes ASCII bytes to file and 3+1 writes CBM screen codes and, as we all know, 3+1 has no inbuilt conversion routine.

Almost true, however, is not wholly true.

Recently I needed to convert a Script/Plus document to 3+1 format. I never thought that anyone in their right mind would wish to do this until I realised that the 3+1 WP was probably the best vehicle for a descriptive 'Read-Me' file for my Plus4orth as every Plus 4 owner has 3+1 but not necessarily Script/Plus. I succeeded by employing a couple of small and simple BASIC programs and the procedures outlined above. Since then I have combined the programs into one which append hereto. I'll put a copy into the Utility library as well. It is a long time since I have done any BASIC programming and it took me some time to remember what BASIC does in high memory with variables &c. The first action - to protect high RAM - by lowering the top of memory was in fact the last I programmed!

The program begins by reading a Script/Plus (or any other ASCII) file from disk. This part of the program is based on the sequential file reader in the 1541 user's manual. The bytes read in are placed in memory at the desired location, $C12C et seq. Having read the file, it

converts the ASCII bytes to screen code bytes. It is then a simple matter to enter the monitor and save the area of memory as a program file. I have even appended a routine that will convert the end address of the text to a hex number so that no memory search is required. Having saved the file, the 3+1 WP may be entered and exited as described in the procedures for loading from tape above. The file is then loaded, and a return made to the WP, at which point the converted text is visible and furthermore may be saved by the WP itself.

The program is very simple (and slow). Therefore there is a fair amount of editing to do on the converted text. No doubt some of it could be programmed in, but I consider that the largest document size doesn't warrant the extra effort. The result shows that any ASCII file, including Script/Plus files can be made compatible with the 3+1 WP, but I should think that it is not something that people will want to do very often!

I hope that describing how to do two things with the Plus 4 that are not in the handbooks may enhance its positive features a little. For all the defaults in available software, the Plus 4 gives more value than is at first glance apparent. Now, here is the program:

```
1 REM *** PLUS 4 CONVERTER PROGRAM
2 REM *** BY RICHARD G HUNT
3 REM *** TO CONVERT PLUS 4 SCRIPT PLUS
4 REM *** OR ASCII FILES TO SCREEN
5 REM *** FORMAT FOR 3+1 WP
6 POKE 56,160:CLR
9 PRINT CHR$(14)
10 INPUT "FILE NAME";F$
20 INPUT "FILE TYPE";T$
30 T$=LEFT$(T$,1)
40 IF T$<>"S" THEN IF T$<>"P"THEN IF T$<>"U" THEN20
45 OPEN 15,8,15
50 OPEN 5,8,5,"0:"+F$+","+T$+",R"
60 GOSUB200
65 AD = 49452
70 GET#5,A$
80 IF ST<>0 THEN PRINT: CLOSE15: CLOSE5: PRINT CHR$(14+128): PRINT "END
OF FILE": GOTO 110
85 S$=A$+CHR$(0): S=ASC(S$)
90 POKE AD,S: AD = AD+1 : IF S = 65 THEN PRINT".";
100 GOTO 70
110 PRINT CHR$(14+128): PRINT "DONE READING . . ."
```

```
120 PRINT "NOW CONVERTING . . ."
125 BD = 49452 : AD = AD-BD
130 IF AD > (99*77) THEN AD = (99*77) : REM LIMIT OF 3+1
140 FOR J= 1 TO AD
150 S = PEEK(BD) : GOSUB 600 : IF S=1 THEN PRINT ".";
160 POKE BD,S : BD = BD+1
170 NEXT J
180 PRINT: PRINT "CONVERSION DONE...": PRINT "ENTER MONITOR AND SAVE"
190 GOSUB 1000 : POKE56,253: CLR: END
200 REM FILE NAME ERROR TRAP
210 INPUT#15,A$,B$,C$,D$
220 IF VAL(A$)>0 THEN PRINT A$;B$;C$;D$:CLOSE 15: CLOSE5: STOP
230 RETURN
600 REM CONVERT ASCII TO SCREEN
625 IF S  < 32 THEN GOSUB 700:RETURN
630 IF S => 32 AND S <  64 THEN  RETURN
640 IF S  > 63 AND S <  96 THEN S=S-64: RETURN
650 IF S  > 95 AND S < 128 THEN S=S-32: RETURN
660 IF S => 128 THEN S=S AND 127: GOTO625
700 REM CR = 13 SCRIPT+, 159 IN 3+1 WP
710 IF S=13 THEN S= 159
720 RETURN
1000 REM CALCULATION OF HEX END ADDRESS
1005 H1=0:H2=0:H3=0:H4=0:H1$="":H2$="":H3$="":H4$="":H$=""
1010 BD=BD+1
1020 H1=INT(BD/4096) : BD = BD - H1*4096
1030 H2=INT(BD/256)  : BD = BD - H2*256
1040 H3=INT(BD/16)   : BD = BD - H3*16
1045 H4=BD
1046 PRINT H1;H2;H3;H4
1049 RESTORE
1050 FOR J = 0 TO H1: READ H$: H1$= H$: NEXT:RESTORE
1060 FOR J = 0 TO H2: READ H$: H2$= H$: NEXT:RESTORE
1070 FOR J = 0 TO H3: READ H$: H3$= H$: NEXT:RESTORE
1080 FOR J = 0 TO H4: READ H$: H4$= H$: NEXT
1090 PRINT" START ADDRESS = $C12C"
1095 PRINT" END ADDRESS   = $"H1$+H2$+H3$+H4$
1099 POKE2040,128
1100 DATA "0","1","2","3","4","5","6","7","8","9"
1110 DATA "A","B","C","D","E","F"
1200 RETURN
```


MIKE'S MEANDERINGS

by Mike Todd

Happy New Year! I trust everyone had a pleasant Christmas with Commodore bits hanging out of stockings, and a suitably liquid (orange juice, of course!) New Year celebration.

So, what's 1987 going to bring for Commodore and its supporters. Your guess is as good as mine, although Chris Kaday did hint at some exciting developments when speaking at the November Show. There's little doubt that we shall see the two new Amigas launched, although their final form is still very uncertain and we may not see them until the end of the year. Support will continue for the C64 (in its metamorphosis) and the C128 (and C128D) and there even seems to be some indication that the good old Plus4 is seeing something of a revival, mainly due, I guess, to its cheap price.

As for yours truly - well, 1987 is going to be a more sociable year. Instead of locking myself away for many hours at a time pounding the keyboard, I intend to take things a bit more easily. As a result, my ICPUG activities will become more carefully partitioned (although that's not to say I shan't be just as active!). Several people keep telling me it's high time I was married (to a woman that is, not ICPUG and the computers) since I've now passed the half-way point on the journey towards the biblical limit - well, we'll see!

HELP LINE

Can I say first of all how impressed I was with the response to the HELP questionnaire put out with the last newsletter? Several hundred completed questionnaires have been returned, and as I write in early January) they are still coming in at a significant rate.

As a result of the large numbers and the fact that the flow has still not ceased, I must postpone publication of the completed HELP line list until next issue.

The final list will be very selective I'm afraid, since I can't possibly list all the offers of help. However, I will hold all the unlisted offers on file for future reference.

The procedures for using the HELP facility will also be published next time, although the rules will be very simple. For written queries, no response without a stamped addressed envelope and for phone queries, the times and conditions must be strictly observed.

GEOS IN TRUE PERSPECTIVE

Roger Massey

Many of you reading this article may have been considering the purchase of Geos, but are now having second thoughts about whether or not it will be of any real use, or even if it will run on your current system without any hiccups. Equally, anyone having read reviews of this package in the Commodore computing magazines may have been misled into thinking that Geopaint and Geowrite are all there is to Geos, which could not be further from the truth. In order to redress the balance we shall take a look at version V1.2 as currently supplied by First Analytical; you may find it useful to refer to an earlier review in the Sept/Oct newsletter.

The whole purpose of Geos is not to provide a graphics and text page editor in the guise of the aforementioned applications, but rather to provide a WIMP operating environment similar to that found on machines like the Amiga, MacIntosh etc. The philosophy behind this operating system is that it should be updated periodically in order to enhance its capabilities, and before you shout 'Rip off', these enhancements come for the cost of the postage and packing plus the blank media. In fact, the first of the updated versions will be available shortly and I hope to cover any improvements made at a later date. However, for the purpose of this article we shall restrict ourselves to version V1.2.

Geos was engineered to perform on a C64 and 1541 disk drive although it is not restricted to this combination of hardware. I personally use a C128/1570 and have been able to test various combinations of drive/computer without experiencing any problems. Those tested include 1541, 1541c, 1570, 1571, with C128 (in 64 mode), C64c, C64 and C128D.

One criterion for implementing a new operating system on any hardware, is that of disk operations speed, an area in which Commodore do not appear to excel. To improve matters, Berkeley included a Turbo-utility within Geos which is used for all files under 29k, even non-Geos program files. If this size is exceeded, then loading takes place using the normal Commodore DOS routines. Contrary to any previous version, V1.2 does allow the user to re-enter Geos after running a non-Geos program. This is achieved by re-inserting the master disk into the drive and pressing the restore key. The only condition to be observed is that the area of RAM #C000-#C100 is not overwritten, since this is where the re-boot code resides.

The point of criticism most commonly levelled at Geos is that it

uses a joystick as the input driver as opposed to a mouse. I am sure that not everyone owns a mouse, and if they did, the chances are that they would not all be from the same manufacturer. Therefore, Berkeley would have been faced with a compatibility problem or forced to include such a device within the package, adding considerably to the price. Most computer users do however own a joystick, and so this was the chosen option. Incidentally, the joystick driver is itself compatible with the 1351 mouse available in the States now, and shortly also here. Being restricted to one type of input device is not the ideal solution, and so drivers supporting various devices will be made available in the near future.

All Geos-formatted disks and those converted to Geos format contain an extra 1k block of directory space, without the loss of any data. It is this extra space that allows for the time and date stamping of files, and also tells the operating system something about what type of file it is and, if a data file, which application created it. There are only three main filetypes: application; application data; and system files. Geopaint and Geowrite are application files; any data created by them forms application data files; while the Geos Kernal and Input driver are examples of system files.

To enter an application, we simply click on its icon twice in quick succession, or click once, and then use the 'open file' option from the pull-down file menu. However, if one wanted to continue work on a document, e.g. an unfinished letter using Geowrite, this would necessitate loading Geowrite itself and then the incomplete document. Using the expanded directory, we simply open our incomplete file using one of the clicking options, and this in turn will firstly load the application that created it (using imformation embedded in the directory entry), and then the data file (our letter) itself. Entry is made to the exact point where we closed the original file and, in the case of Geowrite, the tab stops, current text font, page width etc are all restored to the original settings used when the file was previously closed.

There is little point in providing a new operating system and the applications to run under its control, unless there is compatability in the data structure. Imagine a suite of programs to include a database, wordprocessor and spreadsheet, whose data structure was not compatible. Each program would have its own degree of usefulness as a stand-alone unit, but that is as far as it would go. Add the compatibility factor, and immediately we have enormous power at our finger tips. Geos allows the transfer of data from one application to another via its built-in

cut-and-paste facilities.

At the moment, because there are only two applications available (Geowrite and Geopaint), this means that we can freely and easily transfer picture or text data into Geowrite documents or paste pictures or text into Geopaint documents. To do this, we simply mark the area of text or picture data required and cut or copy it into a temporary storage file, referred to as a scrap. Thus, the photo scrap holds the current edited picture data, and the text scrap the current edited text. Having created the scrap (an automatic function of cutting or copying) we are offered several choices: we may wish to place this scrap elsewhere within the current document; place it in a document from a different application; or store it in either the photo or text 'albums', all of which are tasks simply carried out from within Geos.

The text album can be called up from any application, and exists to store a number of text scraps in album fashion. Likewise, the photo album performs the same task for picture data. As editing takes place in any application, the current associated scrap will be overwritten. Thus the text and photo albums provide a safe place to store scraps, and can themselves be edited to remove redundant data, or updated with new data. In fact one may have several text or photo albums of differing names on the same disk.

The Preference manager allows the user to change some of the default parameters of Geos. When using the Preference manager, your edited changes can be either temporary, or made permanent for the disk currently in the drive. The elements that can be changed consist of the following:

Background, foreground, border and pointer colour.
Current time and date
Pointer momentum, maximum and minimum speed.
Pointer icon customisation.

Having made the necessary changes one can then exit from the Preference manager, in which case the changes made take immediate effect and are temporary. Selecting the save option by clicking on the save box, creates a file called Preferences. The process of changing and opening a disk as the current work disk causes Geos to search for this file, and your altered values will automatically be implemented. There is also a default option within the menu which, when selected, returns to the default settings as on the master disk. In order for the time and date stamping function to operate correctly, it is therefore necessary to enter the Preference manager at least once every time the current disk is changed, preferably immediately after opening it.

Due to a small oversight, the clock in some versions of Geos V1.2 loses 10 seconds in every minute. This is because the States has 60Hz mains frequency, whereas here in Britain it is 50Hz. To correct this, First Analytical have a small basic program that alters the Geos Kernal file on the system master, restoring the clock to perfect accuracy. Unlike the Commodore variable TI or TI$, the clock within Geos is not halted during disk operations, and therefore once set will continue to display the correct time until we power down.

When booting Geos for the first time it is obvious that there is in fact no free space left on the master. Before we can use one of the applications it is necessary to make a work disk, although the first thing one should do is make a backup of all of the files on the master disk. Transferring files from one Geos disk to another is easily done with either the backup utility provided, the copy option found under the pull-down disk menu, or manually by selecting only those applications and accessories that you think will be of use. The backup utility copies all files from any disk to another by using a series of disk swaps, as does the copy option (unless you have a two-drive system, in which case swapping is not necessary). A work disk can be created by using either backup or copy and then deleting all unwanted files, or by manual transfer. This latter option is carried out by removing a files icon to a point outside the desktop area, as described in the manual, then closing the current disk and removing it from the drive. When another disk is inserted and opened, the files icon is simply moved back into the desktop area, which is interpreted by Geos as being a request for a file copy. Following the on-screen prompts results in the file being transferred. Thus, work disks can be precisely tailored to meet specific needs.

Specific needs will also be catered for with regard to various printers and input devices such as graphics tablets, light pens, mice (if that is the plural of mouse in this context) etc. Future plans for Geos include a C128 version (to include a RAM disk); a user reference manual so that we can write our own applications linked to the operating system; new applications; and further text fonts, etc. I hope through the pages of the newsletter (editor permitting) to bring you news and details of all new releases as they become available.

In summary, Geos is the first really serious attempt to implement an expandable WIMP operating environment on the lower-priced Commodore machines, and one that is sure to succeed. It is ourselves, the end users, who will to a certain extent decide what we require from Geos in terms of software and hardware support. To achieve what you want, make

your feelings known, and I am sure that your needs will be fulfilled. To write a full review of Geos would take up many pages, and so I have picked on what I consider to be the more useful and important points of this package.

Since writing this article the first disk of updates has become available, as have three new application disks to run within the Geos environment. The update disk includes amendments to desktop, geowrite, geopaint, text manager, photo manager, and a number of new printer and input device drivers. For the cost of these and the new applications, refer to discount corner.

--oOo--

REVIEW—THE LAST ONE

by Peter Dolphin

I was delighted when asked a few weeks ago to review The Last One, as I remember the disbelieving furore when it was first announced, rather before any working copies. Eventually it did come out, and it must have worked, but it never really made the impact that its authors had hyped.

Now TLO is due for a relaunch. Chris Wright, in Lancashire, has taken over the marketing after doing a major rewrite of the whole program to fit it for the 64 (or indeed the 128 in 64 mode), and this is what I have for review; I never even saw any results from the original version, so I am unlikely to be influenced by what went before.

The program arrived (together with a disk of Help screens) in the back pocket of the Instruction Book, which at this stage is a loose-leaf file, although the final version will be a properly bound A4-size book. It runs to 113 pages plus 2 of index, and apart from some typos and the customary misuse of apostrophes and a few spelling errors, it is impressive in the detail with which every function is explained.

In addition, there is a simple (?) tutorial program worked through in minute detail to accustom the user to almost all the functions that are available, except the mathematical calculations on numeric fields in the end programs. And a further section describes each function separately, so that the user can make the end program dance to his particular tune.

I was impressed with all the facilities, and am pretty confident that it would handle most database requirements that you could want. As I said, the instruction manual is good, although I think there is insufficient help in the design of flowcharts to allow a novice to

write an application straight off unaided. Also available is a most important, even vital additional book, called 'Hints and Tips', without which any of the more complex programs would be difficult to write. This gives sample program fragments for some of the techniques which might not be obvious on first (or indeed, second) acquaintance, such as the deletion and re-use of records, validation of input, use of windows, and most important, calculations. I think this book should be bundled with the instruction book, rather than sold separately, the price being, if need be, raised to compensate.

Flowchart

It might interest readers to see what a TLO flowchart looks like, so here, copied from the sample program, is one:

```
1 . . Branch on a menu:1-3to2,7,18
2 . . Set pointer to end of MAILING
3 . . Keyboard input using MAILING fields
4 . . Write to MAILING
5 . . Ask user "Have you finished?":branch if no to 3
6 . . Direct unconditional branch to 1
7 . . Branch on a menu:1-3to8,13,1
8 . . Set pointer to start of MAILING
9 . . Search MAILING:if eof, branch to 11
10 . Display data using MAILING fields
11 . Ask user "Another search?":branch if yes to 8
12 . Direct unconditional branch to 1
13 . Sort MAILING
14 . Set pointer to start of MAILING
15 . Read MAILING:if eof, branch to 1
16 . Display data using MAILING fields
17 . Direct unconditional branch to 15
18 . Terminate
```

At this stage, which is the result of coding the flowchart according to a series of menus, the true coding of the end program commences. One is asked what wording is needed in each menu, and its layout, and TLO goes chuntering on its way with considerable disk activity. (Disk activity is a major feature of TLO, and a 1541 drive gets a lot of bashing, and may really not be up to it. Chris gives some advice on what to do about that.) As the activity goes on, more questions are asked and resolved, and more of the end program is written. TLO keeps you informed as to what is happening, and where it has got to, first by flowchart line number, and then by end program

line number. Eventually it all settles down, and you can then transfer the end program to another disk, and erase it from your copy of the master disk. (You did make a copy, didn't you? You must not use the master, or it will gradually get filled up with non-erasable bits of program, and you will end up in difficulties.)

The sample program

The sample above results in an end program occupying about 36 blocks in the directory. It writes lists of names and addresses and telephone numbers, and allows you to add to them, sort them alphabetically, and print them out. It's not very sophisticated - no deletions - but it is after all only a sample to get you programming along the right lines.

In practice

How did it work for me? My first attempts were a bit of a dead loss, as I discovered that it doesn't work with my Brainboxes IEEE 488 interface and 4040 drive. However, after borrowing a 1571 serial drive, all was well, and I got down to it. First I typed in the sample Mailing list program described above, and after three goes, managed to get a working program out at the other end. That's it: a working database program, after specifying what was needed.

It wasn't quite as simple as that, really. You do have to give a lot of thought to what you are trying to do, as indicated above. Menus, branches, and screen design keep coming at you and you have to be prepared, sometimes for the whole shebang to go off into limbo. What is then happening is that it is trying to code something that is impossible, because you have not thought out your chart correctly. There is then nothing else to do but start again. If, however, you have to stop in the middle, for some reason (sleep?), you can save the situation as it then is, and come back to it later, which is quite a 'plus'.

The code of the end program that TLO produces is not very economical of space, being a complex BASIC program, using lines occupying up to five or more screen lines, which makes it difficult to modify after writing but, of course, one hopes to get it right at the flowchart stage. In practice, I understand, space can be conserved by writing complex programs as a suite of simpler ones, individually called from each other as needed, thus reducing memory occupied at any one time.

I did have some difficulty, too, with the printer specification. I use a DPS 1101 for most of my work, so I thought that it would behave as a Commodore printer, but it didn't. It worked OK when controlled by

the end program, but when printing out trace and flowchart documentation (I should have mentioned that it does this earlier), it received only a LF, and no CR, with each line. The result was a lot of rubbish printed on top of itself at the end of the line. I tried specifying it as an ASCII printer, but that didn't help either. In desperation, I got out my old 3022, and plugged it into the Brainboxes IEEE 488 output, and lo! and behold - printouts. Not at first try, because the interface seems to have some odd effect, stopping TLO working first off, but at the second try it printed nice lists both from TLO, and from the end database program.

On second thoughts, I imagine that this problem with printing the flowcharts could be got round by a preliminary BASIC program to download a change in the printer's interpretation of the ASCII codes, i.e. changing $0A (LF) to $0D (CR), as explained in the DPS 1101 handbook. I haven't tried it myself, but it would seem the right approach.

This program seemed to me to fulfil a need, although I didn't immediately find a simple way to print out sticky labels three-across the page. Later on, after a hint from Chris Wright, I found that you could use a set of non-file fields into which to write the data, three at a time from the file, and then print them out in whatever order you plan, thus solving the problem. You are, however, limited to 99 of these fields, and can therefore only have about 30 fields printed in threes, not that that is a very serious limitation for labels.

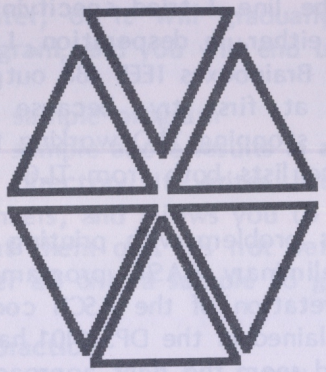
Further development

Further plans are afoot. A version for the 8000 Pet is understood to be available from Chris or from Supersoft, and there is a support 'Hot line'. Coming soon from Chris is a chip for the 128 that will allow it to run 64 programs at 2MHz clock speed, and thus utilise the 1570 and 1571 drives faster. Lastly, TLO will run under GEOS, one of the first programs so to do. (Disks can be formatted for this purpose.)

Conclusions

Would I buy it? Like a shot. And I would insist on the 'Hints and Tips' to go with it. It is (relatively) simple to operate. It produces working end programs, which can be copied - and indeed sold, provided an acknowledgement to TLO is included. TLO itself is, of course, copyright, but you can, and should, make as many copies for your own use as you like. What you may not do, on pain of dire penalties if caught, is pass it on to someone else (programs are serially numbered).

--oOo--



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JIM'S JOTTINGS

by Jim Kennedy

Introduction

The first Newsletter of the year usually carries a brief article about what ICPUG is, what new members may expect from it and how best they can utilize its services. I see no reason to change this format and so I shall 'borrow' heavily from such a former introduction by Mike Todd.

ICPUG exists for the purpose of helping Commodore computer users in whatever manner the users deem appropriate. Members elect a National Committee to run the show and co-ordinate the various activities. These activities include some 60 regional groups; a large library of public domain software (no pirated copies of commercial software allowed - any discovered are removed); possibly the best discount scheme of any computer club anywhere; a technical help programme run by recognized experts; a Newsletter of which we are all very proud; a communications operation that sees us operating on both Micronet and Compunet and exhibitions at most major Commodore and general microcomputer shows. And there are also other major activities in which we are involved but which do not have a highly visible profile: the maintenance of our membership records database, and the keeping of financial records are two very large tasks which most members never hear very much about except at AGM time when reports are given by the officials.

All these tasks are performed by unpaid volunteers who happen to love computing and devote hundreds of hours to helping others who share their interests. In fact, some like Jack Cohen, John Bickerstaff, Joe Griffin, Brian Grainger, Mike Todd and a few others have devoted thousands of hours over the last few years to ICPUG, sometimes at not inconsiderable expense to themselves. They have 'other' jobs such as doctors, accountants, publishers, company secretaries, software authors and consultants, professional engineers, barristers, the military, and civil servants to name but a few. So after reading something in the Newsletter and writing to the appropriate committee member, bear in mind that he may be unable to respond to your request as rapidly as a commercial organization should do. But if you have any complaints or suggestions, please feel free to express them and we shall endeavour to put things right.

Whenever you write to committee members, please enclose a stamped addressed envelope for the reply. Also please place your membership number on all correspondence. This is for two reasons; first, our

membership database is indexed by membership number and second, our libraries and discount schemes, whether through the discount officer or direct to a commercial source require a current membership number to identify members.

If you do write and are sending text or data to the editor or other committee members for publication or to add to our ICPUG information 'storehouse', please send it in machine-readable format in addition to hard copy whenever possible. Keying in your two-page masterpiece about a printer definition file for the XYZ printer during the wee hours of the morning is not everybody's idea of fun. The same holds if you are seeking technical help: machine-readable copy is very important for program queries to save time entering data by hand.

Speaking of writing, contributions are always welcome from any member. As should be evident from reading the Newsletter, we do a thorough editing job and cannot guarantee articles will be published exactly as received. We also have to omit some articles for which there may be too few readers using the same equipment or program to make it economical to publish. Don't forget our membership, although predominantly based in the British Isles, is nevertheless worldwide. And postage rate breaks mean we must sometimes cut out an extra page or two to avoid incurring an even more astronomical postage bill. But we do need articles from members! If you are uncertain about whether to write one, don't hesitate to ask the editor's advice.

If any of you feel you would like to help with the task of running ICPUG please write or ring me (or any other National Committee member) and express your desires and interests. We co-opt many people on to the committee as assistants or to fill various roles as the need arises. Many of these people then become more deeply involved and end up being elected to office. In fact that is how I got started in ICPUG. I attended an AGM one year and the Chairman at that time, Mick Ryan, begged and pleaded for someone to take over the Exhibitions Organizer job as Jennifer Goldsmith moved over to being Treasurer. I volunteered and well, here we are a few years on and, as they say, 'who'd have thunk it'.

Club ties

We have made arrangements for an ICPUG tie. The price is £3.00 per tie shipped to members anywhere in the world. The ties are in Navy with a small ICPUG logo below the knot in gold. Send cheques or postal money orders in pounds sterling to me, Jim Kennedy, at the address inside the front cover. We are placing an initial order for 200 ties and if demand

exceeds this quantity we shall order more, but there will be a delay of around two weeks. Will those who responded previously to me requesting ties, please send your money as soon as practicable for the tie that will have been reserved for you?

Newsletter

We are planning to change from using WordCraft on a PET with a daisywheel printer to producing the Newsletter by VizaWrite Classic on a 128 driving a Hewlett-Packard Laserjet printer sometime later this year. It will mean a much improved layout with better fonts and a more professional look. It will also be easier and faster to produce. The committee is keeping its collective eyes open for an Amiga word processing/desktop publishing package that can drive a laser printer for future use, but the 128/VizaWrite setup looks quite good for the present. In fact an Amiga user group in California uses a 128 with VizaWrite and a laser printer for their newsletter, there being no suitable packages yet for the Amiga. VizaWrite Classic on the 128 looks to be the best complete, high-quality, desktop publishing package around for our use. About the only thing it won't handle is embedded high-resolution graphics from packages like Deluxe paint on the Amiga. Of course if, like the ICPUG Newsletter, one is producing camera-ready copy for the printer, then one may still use 'cut and paste' methods by allowing space in the text for graphics. I'll try to keep everyone posted on progress.

Brain Boxes interface

I wish to relate a short story. Shortly after assuming the role of Chairman of ICPUG I had to acquire an 8250 disk drive in order to access the membership records. This need arises because the ICPUG membership file requires a drive capable of handling almost 1Mb of data. Since I already owned a 128D, getting an 8250 drive on its own worked out a lot cheaper than buying a complete 8296D computer system. As it requires the use of an IEEE 488 interface, I ordered a Brain Boxes interface designed for both the 64 and 128. It arrived and worked fine, at least for a month.

It then developed a fault, possibly whilst I unplugged it in an attempt to use a file transfer utility that appeared to conflict with the interface, and I couldn't get a picture back on the monitor when I plugged the interface back in. It was around 1pm when I rang Eamonn Walsh of Brain Boxes explaining my desperate plight and my need to access the membership database. We discussed the problem and he said

there would be a replacement in the post that afternoon which I should receive by the next morning. I thanked him but thought to myself I wouldn't see the interface for a couple of days at best.

Around 9am next day a chap with a grey uniform driving a red Post Office van rang my bell and delivered a parcel which I signed for and opened. Joy! I was up and running with the new Brain Boxes Interface 5 minutes later. I posted the old interface back with a letter of thanks for outstanding customer support. It works without any problems and appears to be completely transparent to all software. It will now be extremely difficult to convince me to use any IEEE 488 interface other than Brain Boxes. Well done, Brain Boxes!

It was reviewed by Brian Wise in the Sept/Oct 86 Newsletter. Members may also obtain a 15% discount on this and other Brain Boxes items through the Discounts Officer. I should mention that I tend to use three packages in my 128D almost all the time: VizaStar, Superbase and Superscript. The Viza Star cartridge is left plugged into the top of the Brain Boxes interface where the designer thoughtfully added an extra slot. The 8250 drive is plugged into the Brain Boxes interface and I also have a DPS1101 printer connected to the serial port. All work without problems. By the way they also make an IEEE 488 interface for IBM PC and compatibles which, they say, works with all languages including BASICA, PASCAL, C, FORTRAN and Assembler and runs under DOS 2.X and 3.X. If I had a PC 10 or 20 and some PET IEEE 488 devices around I think I'd be talking to Brain Boxes about this device.

Membership

ICPUG is now advertising in two of the popular magazines, 'Commodore Computing International' and 'Your Commodore'. Whilst this does not constitute an official endorsement of either magazine, it does reflect where we see our future membership coming from. We shall also be placing our new membership forms in selected computer books. Bear in mind that the more members we have in ICPUG, the cheaper it is for everyone. This is due to the fact that items like the Newsletter expenses, software library overheads, and exhibition costs are large and 'fixed'. So if every member could recruit one new member it would help keep our subs low. The current level of £10 per year (plus £1.00 joining fee) is just about the lowest of any organization of its kind, and we want to keep it that way. And judging from the response we have had in memberships over the last few months many of you out there are doing a good recruiting job. ICPUG is continually growing and we are now printing 1000 more Newsletters more than we were last autumn to

keep up with new members. 1987 looks like it could easily be our best year yet.

CBUG

We have now established contacts with CBUG, the Chicago B128 User's Group (the B128 machine is the same as the 700 which was sold here in Europe). We exchange newsletters with each other and have agreed to let each use the other's articles. However, if you have a 700 machine you may wish to consider joining that specialized group. 700 users will know what I'm talking about, as there is not much software or support for the system about, Commodore having dropped it from their range of business machines to concentrate on making C64's in spite of it being a very good machine with much potential. Anyway for those with 700s, the address of CBUG is:

CBUG
c/o Norman Deltzke
4102 North Odell
Norridge
Illinois 60634
U.S.A.

The cost is $21.00 for surface mail or $35.00 for air mail (US dollars only) and they publish a newsletter called the 'CBUG Escape' four times a year.

COBOL SIG

Bill Bremner is a COBOL enthusiast. He has tested the now very cheap Nevada COBOL package with CP/M 2.2 and the Z80 cartridge as well as with CP/M 3.0 (CP/M Plus) on the 128; it appears to work with both of them. Bill is willing to set up a COBOL Special Interest Group within ICPUG if enough are interested. Contact Bill at 18 Shelley Drive, Stratford-sub-Castle, Salisbury, Wilts if you would be interested in seeing such a group formed.

Miscellaneous

I haven't had a chance to put a Super* Corner together over the holidays so there will be one less 'corner' in this issue. However, Ian Moran sent me a copy of his definition file for Superscript 128 which drives his Star NL10c printer. I don't have it on disk so if any of you want a copy send me an SAE.

I had hoped to have a review model of a printer buffer that has recently been advertised for sale in this country by now (early

January), but it has not arrived. I therefore don't know how well behaved it is with various packages like Superbase, Superscript, VizaWrite, VizaStar, Print Shop, SwiftCalc with Sideways, the Commodore Modem, and the whole host of other programs that are capable of large text or graphic outputs to daisywheel and dot matrix printers. I may be able to report on it by the next Newsletter, where we also hope to have a review of VizaWrite Classic on the 128, written by either a selected reviewer or, failing that, myself. As I mentioned above, we are planning to use it to edit the Newsletter so I'm certain everyone will be very interested in it. I have just started to acquaint myself with this product and first impressions are very good. It looks particularly powerful for editing and printing of text as it allows for justified proportional spacing, column (newspaper style) and accepts the output of most other WPs.

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80-COLUMN TV DISPLAY FOR THE 128

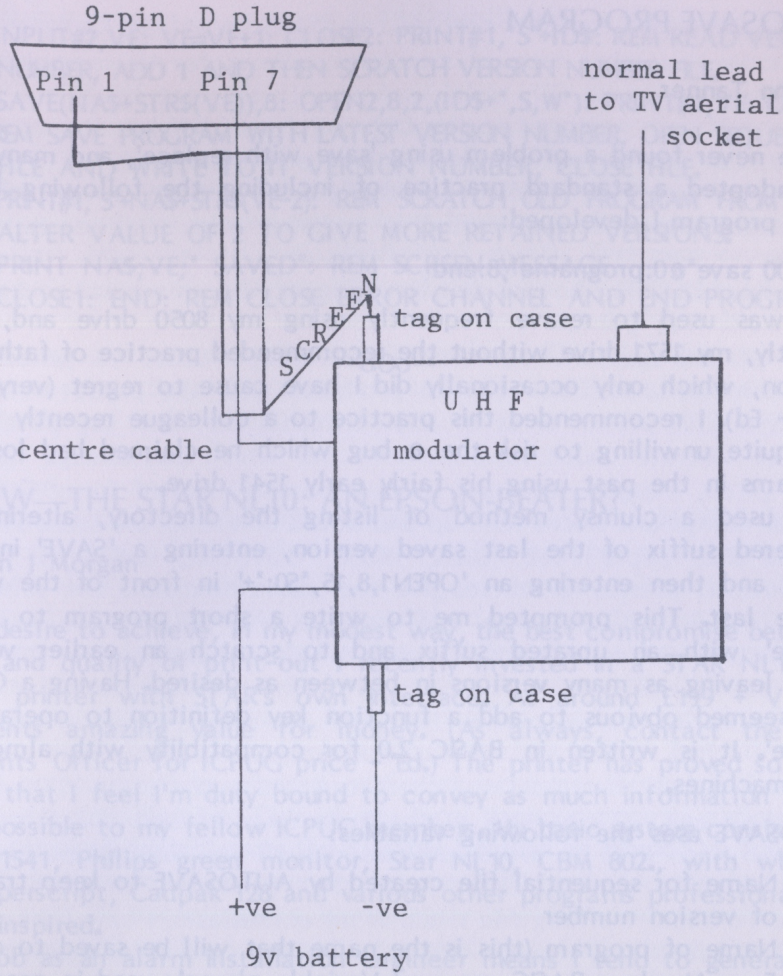
by Bill Clewlow

It is possible to display 80 columns on a normal television screen, if you are prepared to accept only black and white. The adaptor I made uses only a few components, all of which are available from a good electronics shop or from one of the many mail-order firms who advertise in electronics magazines.

Parts required:

9-pin 'D'-plug
Co-axial cable (sufficient length to connect 128 to modulator)
PP3 (or other) 9v battery
UHF Modulator (e.g. Maplins XX05F/UM1111 at £3.40)

Connect the parts as shown in the diagram. The D-plug is connected to the 80-column RGBI port on the back of the 128 (2nd socket from the right looking from the BACK of the 128). Use the standard aerial lead to connect the output from the modulator to the television aerial socket. Tune in carefully to the appropriate channel (36 for the Maplin modulator) and hey presto! - 80-column display.



[Editors' note: We have not tested Bill's idea but it is theoretically correct and should operate without problem. However, it is only fair to add that all 80-column adaptors (admittedly colour) we have seen have produced very mediocre results and would certainly not be suitable for wordprocessing or similar text-based 'business' applications.

--oOo--

AUTOSAVE PROGRAM

by John Tanner

I have never found a problem using 'save with replace', and many years ago adopted a standard practice of including the following line in every program I developed:

```
20000 save"@0:progname",8:end
```

This was used to resave frequently using my 8050 drive and, more recently, my 1571 drive without the recommended practice of father/son caution, which only occasionally did I have cause to regret (very lucky man - Ed). I recommended this practice to a colleague recently but he was quite unwilling to risk the @ bug which he claimed had lost him programs in the past using his fairly early 1541 drive.

He used a clumsy method of listing the directory, altering the numbered suffix of the last saved version, entering a 'SAVE' in front of it, and then entering an 'OPEN1,8,15,"S0:"+' in front of the version before last. This prompted me to write a short program to give a 'resave' with an uprated suffix and to scratch an earlier version, while leaving as many versions in between as desired. Having a C128 it also seemed obvious to add a function key definition to operate the 'resave'. It is written in BASIC 2.0 for compatiblity with almost all CBM machines.

AUTOSAVE uses the following variables:

ID$ Name for sequential file created by AUTOSAVE to keep track of version number
NA$ Name of program (this is the name that will be saved to disk)
EN Error Number; BASIC reserved Variable cleverly used in prog.
VE Version number.

(The program has been modified by Henry Velleman to make the logic easier to follow, and also to remove unnecessary (and risky) OPENing and CLOSEing of the disk Error Channel 15.)

```
19000 KEY5,"GOTO20000"+CHR$(13):REM PROGRAM C128 FUNCTION KEY NO 5
20000 NA$="PROGNAME     ": ID$="0:C "+NA$: NA$="0:"+NA$
20005 OPEN1,8,15: REM OPEN ERROR CHANNEL TO DISK.
20010 OPEN2,8,2,(ID$+",S,R"): INPUT#1,EN: IF EN=62 THEN VE=1: CLOSE2:
      GOTO20030: REM ATTEMPT TO OPEN VERSION NO. FILE
20015 REM DISK ERROR NUMBER 62 IS FILE DOES NOT EXIST.
```



```
20020 INPUT#2,VE: VE=VE+1: CLOSE2: PRINT#1,"S"+ID$: REM READ VERSION
      NUMBER, ADD 1 AND THEN SCRATCH VERSION NUMBER FILE.
20030 SAVE(NA$+STR$(VE)),8: OPEN2,8,2,(ID$+",S,W"): PRINT#2,VE: CLOSE2
20035 REM SAVE PROGRAM WITH LATEST VERSION NUMBER, OPEN SEQUENTIAL
      FILE AND WRITE TO IT VERSION NUMBER, CLOSE FILE.
20040 PRINT#1,"S"+NA$+STR$(VE-2): REM SCRATCH OLD PROGRAM FROM DISK;
      ALTER VALUE OF 2 TO GIVE MORE RETAINED VERSIONS.
20050 PRINT NA$;VE;" SAVED": REM SCREEN MESSAGE
20060 CLOSE1: END: REM CLOSE ERROR CHANNEL AND END PROGRAM
```

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REVIEW—THE STAR NL10: AN EPSON-BEATER?

by Alan J Morgan

In my desire to achieve, in my modest way, the best compromise between speed and quality of print-out I recently invested in a STAR NL10 dot matrix printer with STAR's own interface. At around £199 + VAT it represents amazing value for money. (As always, contact the club Discounts Officer for ICPUG price - Ed.) The printer has proved so good in use that I feel I'm duty bound to convey as much information about it as possible to my fellow ICPUG members. My basic system consists of: C128, 1541, Philips green monitor, Star NL10, CBM 802., with which I use Superscript, Cadpak 128 and various other programs professional and home-inspired.

My job as an alarm installation engineer means I tend to generate an awful lot of information, most of which has to fit on various types of forms and reports. For this purpose the old 802 was beginning to wheeze and the typeface was not really professionally acceptable. At the same time, as I couldn't afford a daisywheel as well, I plumped for an NLQ type; hence the NL10. After unpacking the STAR I was pleased to note that everything that was needed was there (one can't always guarantee this). The machine is quite substantial in size, maybe 2 inches bigger all round than an 802, except in depth, where it is similar. This, with its styling ,has produced an extremely attractive and elegant printer. The interface is supplied as a plug-in cartridge blending in with the rear of the printer, producing no ugly 'add on' effect. A minor plus point is the colour, almost an exact match for the C128.

The cartridge, which can be changed for compatibility with practically any other type of computer, allows for 'daisy chaining', as it has two CBM-type DIN serial sockets. ALL the features of the printer can be software-switched so the DIP switch, provided at the rear of the printer, can be forgiven its inconvenient position.

A slim manual is supplied for the printer and an altogether more informative spiral-bound manual is provided with the interface. This interface manual is a gem as it shows with examples, index and appendices EXACTLY how to do everything you've ever wanted to do with a dot matrix NLQ printer!

The printer uses the common Epson escape codes to generate its numerous features. These can be produced with the printer simulating exactly a CBM printer or as an ASCII type. On the front top panel there are five discrete touch sensitive switches which can change the type style, pitch, margins, top and bottom borders, top of form, self tests (2), hex dumps and micro feed up and down. In normal use these switches are on-line, paper feed, t.o.f., mode, draft/NLQ and bold. Various combination presses of these give the above features. The semi-auto sheet feed is very effective and accurate and can operate in tractor and friction modes. The basic speed is also impressive at 120 cps in draft and 30 cps in NLQ. The STAR is a fine graphics printer with very good definition and resolution (although I'm no expert at programming it yet - I had to rely on the supplied programs). It can also accept a complete set of user-redefined characters and retain these in memory in both draft and NLQ, as well as the more usual foreign character sets.

When used with a word processor such as SuperScript with its programmable printer definitions the printer's versatility really shines. To avoid waffling too much in my enthusiasm, I have included my own PDF which can, through the defaults file, switch from pure CBM to ASCII to keyboard (CBM) graphics which allows forms to be produced etc. As a bonus the up-arrow in the PDF can produce a top of form code allowing up to six columns (newspaper style printing). Altogether, a fine machine.

(Alan included his default, pdf, feature command, and printer test files, together with sample printouts - the mini-print, 4-column, newspaper-style printout is particularly impressive - the fruit of 4 months' trial and error. We regret not having space for them here, and suggest that any interested readers contact him at 48, Colemere Drive, Thingwall, Wirral L61 7XT, with large SAE).

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PERILS OF PORTIA, AGNUS & DAPHNE—1

by Brian Grainger

For the first time since 1979 I find myself in the same position as the majority of new owners of Commodore computers: I do not have a clue about the computer I have! Yes, I have bought an Amiga, as I promised myself last May (Ref. ICPUG Vol.8 No.3 p.211). The purpose of this occasional series of articles is twofold. First to indicate to other ICPUG members, who I am sure will follow my route, the problems that will occur, and occasionally some solutions. This, I hope, will save them some time. Secondly, to give Mike Todd some ideas for the Amiga-Watch column, as he asked last time.

Kitting out

The story starts at the November Commodore show. I had decided that the price of the Amiga had reached an acceptable level but more importantly I felt if I didn't get one soon I would get too far behind in trying to understand the machine. Having decided to get one the next question is what hardware to buy. I cannot stress too strongly the recommendations made by Mike Todd in his articles. You certainly need the 512K memory, and the external disk drive is highly desirable. Plan to get the System 2 Amiga or at least plan to buy the extra bits within 2 months. The second point should be obvious, and that is to buy through ICPUG. The savings are considerable. One of my local group members, although an ICPUG member, bought over the counter because he needed to buy it via HP. This is throwing away money that you will need. You should plan to buy at least 20 microfloppies immediately (say £40) and probably some books (say £20 each). I suggest an additional £100 above the Amiga price will cover immediate expenses. If you cannot afford this much, then you will only be disappointed because you cannot tap the true Amiga potential on a bare-bones system.

The other item of hardware is a printer. I guess this is very much a case for personal preferences. I got one immediately and chose the MPS1000 because it (a) has had good reviews, (b) is a badge-engineered Epson and (c) works with the 64 without additional interfaces. I have found only two irritations with it: the DIP switches, which must be changed when using it with a 64, are located in an awkward position. Secondly, the hi-res dump facility from the 64 is slower than expected. I am used to a VIC 1515 printer. If anyone knows why the MPS1000 is slower, I would love to know. It is OK with the Amiga, however, where

it uses IBM-mode graphics rather than CBM mode.

Setting up

Having got the equipment you need to set it up. Installation is easy but take your time in considering the location of the equipment particularly if you have a 64. When I reviewed the Amiga last May I said I was disappointed that I could not use existing Commodore hardware with the Amiga. While this is true, the converse is not. I have mentioned that the MPS1000 will work with the 64 and the Amiga monitor will, with a suitable cable, work with the 64 as well. You should therefore consider placing the two computers in close proximity. The other consideration is a free area for using the mouse. I shall explain later that if you have an external disk drive this may not be a problem. My own layout is to have the external drive on the right of the Amiga with the 64 on the left and printer on the far left. The 64 requires a 1541 disk drive, which in my case sits between 64 and Amiga. It is extremely irritating that I cannot use this drive on the Amiga. It is not speedy but how else does one transfer existing database and word-processed data from the 64 to the Amiga without retyping it all - one query for a future Amiga-Watch, Mike.

In my set-up I have found I do not need space for the keyboard. When the Amiga is off. the keyboard is stored under the unit anyway; when I am using it I find the keyboard will rest with its top edge at the function key end just under the front of the Amiga unit with the bottom edge pivoted on the surface holding the Amiga unit. The keyboard itself then automatically slopes at a reasonable angle. With all the units connected together there are a fair number of wires to hide. This is another consideration. Finally you may wish to place the Amiga near your stereo system to make full use of the sound. The Amiga monitor is monophonic only, despite speaker slots to either side of the cabinet.

Having set up the system and switched on to see that it works the next thing to do is read the manuals, or at least the 'Introduction to Amiga' manual. Very few of us, including me, read the manuals until something goes wrong that we do not understand. However, the Amiga is so different it is essential to read the manuals to do the simplest things.

Starting up

The first thing to do when you first turn on is to copy the system disks. There are three ways of doing this, each one totally different to the way we are used to when using other computers. Reading the

manuals beforehand will enable such routine jobs to be done quickly, allowing more time to play with the machine. I think Brian Fowler increased the time he took to solve the MPS1000 printer problems because he he had not read the BASIC manual fully. Although it is not clear it does indicate (on page 5.3), despite what Brian says, that the use of PRT device requires the use of special Amiga-specific escape sequences. It also indicates that the PAR device will allow the printer escape sequences to be used, although it discourages its use.

The second thing to do on first turn-on is to alter the system preferences to suit your own needs. Most will not need to be changed but printer selection will probably need to be looked at. One other thing to look at is mouse speed. As supplied, the mouse speed is set at level 2. I found that on level 1 the whole screen could be navigated by moving the mouse on the top of the external disk drive - hence my remark earlier that consideration of free area for a mouse is not a problem if you have an external disk drive.

The major problem with the manuals supplied with the Amiga is not that they are poorly written: in fact they are good. The real problem is they do not cover fundamental topics that you are going to need to know very quickly. The CLI commands are not covered at all, although the Amiga Tutorial disk sheds some light. Using the inbuilt file editors is not covered. Creating your own icons is also left to manuals that you have to purchase separately. One thing you are sure to find happen to you is the mysterious 'Guru Meditation' message. This is not mentioned at all in the manuals but what it means is that the system has suffered a severe system crash. I still don't know what the accompanying numbers mean with the message and perhaps our own Guru, Mike Todd, can meditate on that. Mike has done his part to introduce some CLI and ED commands in Vol.8 No.5 for which I was very grateful. His list was not comprehensive, however - for some reason the file copy command COPY was not mentioned and command optional parameters were not dealt with. I do feel that Commodore should have supplied at least a 'reference card' for CLI and ED. Perhaps ICPUG can do something - yet another idea for Amiga-Watch.

Running in

So now you are up and running, can copy disks and have set your preferences. Now what are you going to do? You cannot do anything fancy in BASIC yet, as it will take you at least a week to digest the manual. You need some software to play with. Thank goodness the ICPUG Amiga software library exists right now and we do not have to wait for it as

with the PET and 64. To begin to understand the machine you need to run software. Try and collect the PICS-1 to PICS-3 disks, DEMOS-1 and DEMOS-2, GRAPHICS-1 and GRAPHICS-2. Apart from being good fun they are superb for putting those people with an Atari ST, Amstrad PC, BBC Master, etc. in their place. When they ridicule you for spending a little extra money on an Amiga just demonstrate two or three of the programs from these disks, preferably running all at once in a few different windows, and ask them if their machine can do that. They may not admit to being envious but watch them turn faintly green. Another essential disk, if you want some documentation on CLI and ED, is DOCUMENTS-1. It helps to have a printer so you can print a hardcopy of the information on this disk. Finally UTILITIES-1 to UTILITIES-3 will be useful for all those useful things like disk editors etc.

Apart from library disks try and get hold of some commercial software. I've played around with SCRIBBLE, a word processor, and ANALYSE, a spreadsheet, amongst others. Experience of these will help to show how the Amiga can be put to serious use and get you used to using pull-down menus and the mouse. I have been very sceptical of the usefulness of these devices. I still think that in some programs they are a gimmick, particularly in word processors. However, they went up several points in my estimation when I used ANALYSE. One of the major facilities of spreadsheets is the COPY commands where a set of formulae are replicated. In the standard keyboard environment of a 64 with Multiplan or similar it takes a lot of keystrokes. With pull-down menus and a mouse it is so easy it is almost magic!

Playing about

When playing with commercial software, do experiment. I wondered about doing some word processing and running a spreadsheet at the same time flipping between the two. I experimented by loading the appropriate disks, opening the two tasks and switching between the two. I eventually got it working when I understood how windows overlaid each other. While not true multitasking, it is the Amiga's facilities that make this possible, whereas on the ST-PC-MASTER you would be constantly opening and closing tasks to do the same thing.

Minor snags

By this time I had used the Amiga for quite a while and was beginning to see a few of the irritations. First, loading KICKSTART and WORKBENCH, although fast considering their size, is frustratingly slow when you want to turn on the machine and do something quickly, even if

I'm not likely to turn on my Amiga and use it as a calculator, as I did with the 64. Perhaps when the operating software is reasonably bug-free future Amigas may have at least KICKSTART in ROM or battery-backed RAM.

An infuriating feature is the lack of a battery-backed real-time clock. This means if you want the correct date and time (which is very useful for datestamping files when they are created), you must go into preferences and set the date and time every time the Amiga is reset. As a minimum I would like to emulate the PC approach where on startup the date and time could be asked for and input automatically. This can be done by modifying the "s/startup-sequence" but to do this you need to know what to do and how to use ED (Grrr!). Perhaps Amiga-Watch can cover this aspect as well. [Must be telepathy - see p 47--Ed.]

After a while, using WORKBENCH can be irritating when you want to browse around directories and work on files. In some ways WORKBENCH is like Compunet - friendly to use but S-O S-L-O-W when you are browsing. The equivalent of Prestel is CLI! Hence my pleas for some information on CLI.

One more irritation - something I mentioned last May. The keyboard is peculiar to all that has gone before in that the double-quotes (") key is not where one would expect to find it as shifted-2. I suspect the keyboard can be redefined by software to relocate it. If so, then my final plea to Mike Todd this time is, how does one do so?

I hope the above, while being a personal experience, gives some idea of the initial implications of living with Portia, Agnes and Daphne (the custom chips in the Amiga). For the future I hope to try some BASIC programming; look at existing software compatibility with the PAL operating system (1.2); get some manuals; and try to transfer files between ANALYSE and SCRIBBLE. Don't miss Episode 2!

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1520 GROUP NEWSSHEET

The 1520 group may be small, and have had a difficult conception, but they are certainly energetic, and Wal Austin and John Bentley have produced an impressive 6-page newsletter of their own, which we hope to review in the next issue. Anyone desiring a copy should send a stamped A4-size return envelope to J Bentley, 38 Conway Rd, Taplow, Maidenhead, Berks SL6 0LD or to W Austin, School of Geography, Lipman Building, Newcastle Polytechnic, Sandyford Rd, Newcastle upon Tyne NE1 8ST.

REVIEW—SWIFT SPREADSHEET

by DM Thornton

The disk supplied has a 64 version of the Swift spreadsheet on one side and the 128 version on the other, which helps if you have a 128 but no monitor but are thinking of getting one. Swift 128 uses the 80-column screen and leaves the 64 mode in 40-column only.

The Swift 128 spreadsheet is divided into 16,256 cells, more than enough for a normal 128 user. Column widths can be set individually, a great advantage as it allows you to make use of all the cells - other spreadsheets only allow global change of column width.

One of the most important functions of any spreadsheet is its ability to relate different cells on the sheet. Cell references allow insertion of values from other cells after operation of simple formulae; for instance C1 might be set to show the sum of cells A1 and B1, simply by moving the cursor to C1 and entering 'A1+B1' after a special character to show it is a formula, not text. The C1 just shows the sum of cells A1 and B1. All errors are detected and a message displayed in red on the top line of the screen.

Swift 128 makes full use of the function keys, but as these are not very conveniently sited on the 128, I prefer to use the cursor, return, shift return keys, etc. There is also a very powerful 'range format' function, which formats a range of cells, whether filled or not.

Setting the printer is very easy. The initial screen after booting gives information on cursor movement, entering cells, command menus, and Swift functions, and then goes on to ask 'Centronics printer? Yes or No', which is pleasingly simple for these days.

The screen can be split into two horizontally or vertically (but not simultaneously). There is not sufficient memory to view a window with off-screen information superimposed on the screen, which is a pity. Colour control is complicated and the only part of the program I did not like.

The instruction manual is laid out well and also lies down flat, being plastic-multi-ring-bound; it is also understandable, which comes as a pleasant surprise. It does not warn you of one slight drawback, however, that although you can save as many files as you like, only the first 18 in the directory are accessible from within the program.

I can only conclude by saying that the author, Dave Middleton of Metamorphosis Development Ltd, and Audiogenic are to be congratulated on putting together such a first-class spreadsheet for the 128.

The price is £24.95; it can be obtained from Cavendish Computer Centres for 10% less by members.

AMIGA-WATCH

by Mike Todd

Well, there's still no firm news on the formal release of the 1.2 operating system for the Amiga - but we seem to be getting very close. Several 'release' versions have already been seen, and the final release can't be that far away - can it?

When it finally does appear, it will be considered an enhancement (in fact the documentation supplied with it refers to it as the 'Amiga Enhancer Software') and as such end-users will be expected to pay for the package. That's the bad news; the good news is that it is expected to cost very little, and a figure of around £15 has been bandied about.

For your £15 (or so) you will get three disks - Kickstart 1.2, WorkBench 1.2 and Extras 1.2 (including a revised AmigaBASIC and some PC utilities) - and a handbook documenting the improvements.

My own view is that, for once, Commodore may have actually priced a product correctly! The enhancement package has a lot of extras in it and is actually worth much more than the asking price, but it really is essential for all Amiga users. £15 seems to me a very good compromise, bearing in mind the documentation that also comes with it.

Amiga library

Firstly, David Johnson of Skegness has pointed out a small problem with the SCROLL demo on the AmigaBASIC library disk.

Since the timer can return values greater than 32767, the use of integer variables (ts% and tc%) may eventually cause problems. Instead, they should be changed to long integers (ts& and tc&) to overcome this problem. Oh for a search and replace edit function in AmigaBASIC!

As I write this, there is a minor hiatus in the Amiga library development. There is discussion going on within the committee as to how we handle the FISH, AMICUS and other non-ICPUG disks.

Since we have most (if not all) of the most popular non-ICPUG collections, it seems unreasonable not to make these available to members. On the other hand, the ICPUG library as it stands is a sorted, sifted and verified collection of what is available.

Up until now I have been publicising the FISH disks, but none of the others. If we do make all these disks an integral part of the library (but, necessarily, an unsupported part) then the main body of the library is likely to undergo a change to remove source codes (which are generally available on the FISH disks).

In any case, the first release of the library was very much preliminary to try to judge what people wanted and the problems that they may encounter. Now, with considerable feedback on the library organisation, issue 2 was going to be very different in any case.

Exactly how the library will go depends on many factors, and all this should have been resolved by the time you read this. You will also find further information elsewhere in this newsletter as John Bickerstaff is also looking after some aspects of the library.

We also intend to do away with printed lists of software and, from now on, anyone wanting details of what is available should send a single blank 3.5" disk with appropriate retum postage and packing.

Before leaving the subject of the library, can I make a plea on behalf of myself, and all others who copy disks for members.

Copying disks is time-consuming - please help to make the job as easy as possible. To this end, at least as far as the Amiga library is concemed, please bear the following thoughts in mind.

Firstly, remember that we've got to unpack the disks - please don't make packages any more secure than you need to so that we don't have to spend ages cutting through layers of sticky tape to get at the disks.

Secondly, if the original packaging is to be used for retum then don't pack it such that the packaging is all but destroyed on opening.

Thirdly, always ensure that a retum label and postage stamps are included. Please don't include cash since a trip to the post office will always cause a significant delay in the retum of your disks.

Fourthly, bear in mind that any packages that won't go through a standard post-box slot have to be taken to the post office and this can delay things significantly. In my case, I don't get to the post office more than once every five or six weeks!

Fifthly, and this is something very often overlooked, please don't include a pile of labels for us to stick on the disks. Sticking labels on is also a time-consuming business. The ideal is to have all disks labelled, with the name of the disk already written on it!

Sixthly, please make sure that your name and address is written clearly on at least one of the disks in the batch.

Finally, please ensure that the packing is adequate for the retum journey - we can't afford to spend time repackaging disks. Thoughtless packing will result in your disks being damaged.

Timing problems

Until fairly recently, all Amigas sold in the UK were actually NTSC machines which had had the Agnus chip changed to give a PAL specification display using the RGB output. The composite video output (which would be used to feed a non-RGB monitor or a modulator) remained NTSC standard as changes to this section of the board were non-trivial.

Now that the new design circuit board Amigas are being distributed, the composite output has been modified to produce a PAL output. This necessitates a slight change in internal frequencies of clocks to accomodate the change in the colour subcarrier.

However, this change appears (although it is not yet proven) to affect at least one product on the market - only time will tell if this is the case. The change in clock frequencies is actually quite small, but may be significant in some applications and this aspect of the Amiga will need careful watching over the next few months.

Amiga Prestel

Imagine a Prestel terminal that used the mouse to select page routes; allowed you to edit a page just received and then send it straight back (perhaps for use in Chat-line); allowed you to pick up SYSTEL numbers or text using the mouse and use them in response frames, or while editing; had several display sizes; had facilities to print and/or save frames to disk in an orderly manner; was very easy to use, and that MicroNet themselves had chosen to use for in-house work.

In addition, the package coped with the fact that the Amiga can only send and receive at the same baud rate, making the split rate 1200/75 used by Prestel impossible (without the use of a modem capable of doing the speed conversions for you).

All this, and more, is available in Y2's Rubi-Comm package. For your money you get a small black box which plugs into the RS232 port (and is a computer in its own right - with a battery-backed clock/calendar option) and the disk package, which also includes a straightforward, but none-the-less useful, scrolling terminal package.

Drivers are available for most of the major modems in use, and full auto-dial (with directory) facilties are provided wherever possible.

The package is well worth buying (see p450 in the Sept 86 newsletter for ICPUG discount) and, if time permits, I'll do a much fuller review next time. For further details contact Y2 Computing at 111 St Albans Road, Watford, tel. (and Systel) 9823 50161.

Single-drive systems

Amiga owners with only a single drive may, by now, be discovering many of the problems associated with such a system.

Many of the essential files and programs used by the system are

contained on the WorkBench disk and these will need to be accessed at various times, sometimes apparently unpredictably.

In general, the solution is to copy the WorkBench disk (deleting any unwanted files) and include on this copy your own software. In my case, my main WorkBench disk has had AmigaBASIC copied to it, and the CLI icon put into the initial windw.

The biggest problem so far encountered is the use of CLI commands to access a second disk (perhaps a library or FISH disk). In this case, a special feature of the CLI commands needs to be used. Let's start with an example - you've just booted the system with WorkBench and entered the CLI and you now want to see the directory of another disk.

The DIR command is fairly straightforward and if you typed DIR after the CLI prompt '1>' you'll get a summary directory of the WorkBench disk. In a two drive system, getting a directory of another disk is quite simple - you simply use DIR DF1:, where the second disk is in the external drive, DF1:

With a single drive, you need to invoke the DIR command, and then hold it until you've changed disks. This is actually quite simple, since all CLI commands have a form which produces a prompt for the command's parameters. This is done by simply adding a '?' following the command - therefore, to look at the directory of the second disk:

DIR ? (note there's a space between DIR and ?)

you'll then get an odd-looking prompt (actually a guide to the parameters needed) at which point you put the second disk in the drive, and type DF0: at the prompt.

This type of procedure can be used for all commands, such as LIST, TYPE, CD and so on. However, it is a little tedious having to swap disks in this way. If you have a 256k system, then you'll have to live with the problem.

If you've a 512k system, then it is possible to transfer these commands into RAM at startup, and thereafter the Amiga will rarely need to access the WorkBench disk.

The mechanism to do this is as follows:

```
MAKEDIR RAM:C
COPY DF0:C TO RAM:C
CD RAM:C
ASSIGN C: RAM:C
```

This sequence can be included in the startup-sequence and will therefore execute automatically on booting up. Use ED to edit the file

(format is ED S/STARTUP-SEQUENCE - and finish with ESC X).

It may be useful to try and explain what all this is doing.

MAKEDIR RAM:C - this creates a 'C' directory in RAM:, at the same time as initialising the RAM-disk (this initialisation normally occurs only on the first access to the RAM-disk and requires the Ram-Handler software that you will find in the L directory of the WorkBench disk).

COPY DF0:C TO RAM:C - this copies the entire contents of the WorkBench 'C' directory (in other words, all the commands) into the RAM:C directory. This takes a little while and, if you preferred, individual commands could be copied by using commands like

COPY DF0:C/DIR TO RAM:C

CD RAM:C - this ensures that RAM:C is the current directory and will prevent accidental access to the WorkBench disk. You can change the current directory at any time using the CD command.

Finally, ASSIGN C: RAM:C ensures that any attempt by the system to access the C: directory (which is different to the ordinary C directory in as much as C: is actually defined initially as the boot-up disk's C directory) will go to the RAM:C directory and not the WorkBench C directory.

Now, any command typed will be executed from RAM: and not disk.

Prrinters PAR: & SER:

Normally, anything you want to go to the printer is sent to the device name PRT: (for instance TYPE > PRT: FILENAME will type the contents to the printer). In fact, PRT: can either be on the parallel or serial port, and operates according to the printer you set up in Preferences.

Whenever this is accessed, a reset command sequence is sent to the printer which can have disrupting effects under certain cirumstances.

However, if you direct the output to PAR: or SER:, this does not occur, and the printer will stay in its last set-up mode.

I mention this because, when trying to do some listings, I selected condensed mode on my EPSON MX100 (by having a file with the single character - ASCII 15 - and using the TYPE command to send it to the printer) only to find the printer refused to stay in condensed mode.

I then used the PAR: device instead of PRT:, and all was well.

As an additional point on printers, I was using Aegis-DRAW and trying to use the EPSON HI-80 plotter. I had selected the EPSON printer driver in Preferences, but it took a long time to realise that the total lack of co-operation from the plotter was due to an inappropriate reset sequence being sent to it.

All I had to do in this case was to change Preferences to the GENERIC printer, and no reset sequence was invoked.

The significance of the printer drivers as provided on the WorkBench disk (in the DEVS/PRINTERS directory) is that the Amiga uses an internal character sequence for many special print functions.

For instance, "ESC [4 m" selects underline-on (try it in the CLI, simply press ESC key, followed by '[4m' and anything thereafter will appear underlined! - "ESC [0 m" will restore it to normal) and all similar character sequences are intercepted by the printer driver and converted into the code required for the specified printer.

There are several codes like this, but not all will work when typed at the CLI - those that WILL work are as follows (NB: it is assumed you have pressed ESC key first and the case of letters is important):

c	clear screen
[0m	reset screen characters
[1m	boldface ON
[3m	italics ON
[4m	underline ON
[3xm	character colour to x (see note below)
[4xm	background colour to x (see note below)

when setting character or background colour, 'x' determines the colour used. With the normal WorkBench colours the colours are:

x=0	BLUE	x=2	BLACK
x=1	WHITE	x=3	ORANGE

So to set BLACK characters, use "ESC [3 2 m".

Assigning directories

It is possible, on the Amiga, to assign something called a logical device. In appearance, these are similar to the physical devices (such as PRT: for the printer, PAR: for the parallel port or DF0: for the internal disk drive) but their use is rather different.

In general, these logical devices are assigned to directories on the system disk (the technical name for the disk with which you boot up the system - usually Workbench) and they allow easy reference to specific directories. Initially, seven directories are actually assigned. Assuming that you've just booted with WorkBench, these are:

Directory	Path	Use
S	Workbench:s	script & text files
L	Workbench:l	AmigaDOS library files
C	Workbench:c	commands
fonts	Workbench:fonts	text fonts
devs	Workbench:devs	device handlers
libs	Workbench:libs	system library files
sys	Workbench	the workbench disk itself

In general, the system always accesses files through these logical devices. For instance, the CLI commands are accessed through the device C: - so that, when you actually type DIR, the system goes for C:DIR. It knows that C: is defined as Workbench:c, so goes to the c directory on the Workbench disk. These assignments can be examined or changed (as we saw earlier) using the ASSIGN command. Now this feature allows some considerable flexibility. For instance, assuming you're doing a lot of disk copying and were going to use the DiskCopy command often - you could assign this file a logical device name.

Entering ASSIGN D: C:DISKCOPY (watch out for the spaces) will now allow you to invoke this program by simply using the name D: - it's a little like having the ability to rename files on a temporary basis!

Earlier, we re-assigned C: from its original Workbench:c to RAM:c so that any attempt to access a command file using the logical device C: would go to RAM:c and not the disk.

Assignments like this can be very powerful and are used extensively in upgraded systems, for instance, to make the system look at RAM: or a hard disk.

Power and speed

I don't think anyone needs reminding that the Amiga is a remarkably fast machine - especially when one compares it with the rest of the Commodore range.

Well, Computer System Associates of San Diego don't think it's fast enough! They have introduced a range of products that can produce quite staggering increases in performance.

Before going on, the benchmarking standard used in these comparisons is one published in 'Dr Dobb's Journal' in September 1983. As a starting point, the old VIC, using BASIC 2, ran the complete benchmark in 646 seconds - while the Macintosh running the same program, but written in Aztec C, took 353 seconds. The raw Amiga, doing the same routine in Lattice C took 234 seconds and the Hewlett Packard 9826, in

HP BASIC, took 44 seconds. I was surprised to see the same benchmark under AmigaBASIC taking only 73 seconds.

Now - add CSA's Turbo-Amiga with a 68020 processor and try with Lattice C and the original 234 seconds is down to 139 seconds.

Add the 68881 math processor to the Turbo-Amiga package, and change languages to Absoft Fortran F77 and the benchmark is down to . . . 0.4 seconds. Yes - that's a speed improvement over the original Lattice C of over 500 times!

For comparison, a VAX-8600 running Fortran 77 took 0.9 seconds to complete the benchmark.

This hyper-charging of the Amiga is done with CSA's Turbo-Amiga package running at a clock speed of 14.32 MHz in an external expansion box with 32-bit memory.

CSA do a variety of different upgrades of this sort - the Turbo-Amiga represents the top of the range, but substantial speed improvements can be achieved using their straight 68020/68881 piggy-back board which simply replaces the 68000 on the Amiga's main board.

Unfortunately, I don't have full costs of these packages, but they are a snip at something between $1500 and $3000. If you want further details, CSA are at 7564 Trade Street, San Diego, CA 92121, USA - or phone 0101-619-566-3911.

--oOo--

THE RIGHT PRICE FOR PUBLIC DOMAIN SOFTWARE

by PD Reynolds

Public Domain software is created in order to be given away: it is the essence of the writer's reward that he should bask in the admiration and gratitude of happy users of his work. Literary authors often find it difficult to get their writings published and may even pay for the privilege of seeing their work in print but computer program writers unable to find a commercial publisher for their work are fortunate in that publication is virtually free of cost via the various networks of user and special interest groups.

Not all programs are good enough even to be given away free, not when they are written for a system for which a goodly quantity of public domain software exists already, and the more responsible distributors, like ICPUG, do what they can to sort the wheat from the chaff and to promote the copying of only those programs that are likely to benefit, rather than frustrate, their members.

Library work can become quite onerous when it involves vetting, cataloguing and copying and distributing large numbers of disks with enormous numbers of programs: some groups find it necessary to employ paid help and to charge for the copying service. ICPUG's library work is done by volunteers and is completely free to members (the minimal costs being met from central funds) but TPUG, the Canadian Commodore group, charged, as I recollect, $5 per disk. That did cover the media as well as post and packing, which was not bad value when disks cost about $2 a time. In this country the major public domain distributors charge about £3 (plus VAT) for a disk of software or £2 if you supply the disk, currently costing less than 50p for a 5.25" floppy when bought in quantity. At those prices they do a good service but hardly grow fat: many software authors recognise, in the READ.ME files accompanying their work, the reasonableness of such copying charges.

Unfortunately this situation is open to commercial exploitation and the explosive growth in popularity of business computers, implying a new kind of inexperienced purchaser, has added impetus to the ever-latent entrepreneurial instinct. Mr Fraser's IBM PC user group put the price up to £5 a disk, a modest surcharge that possibly goes to subsidise the other benefits his members enjoy, but it was not long before others were offering the same software (it is mostly the same software) at double the price but with no associated services at all.

Responding to an advertisement last November, I leamt that CPL systems of Sheffield offers a pair of catalogue disks for £20 and the complete library of 'over 500 disks' for £2500. The numbers of disks and catalogue disks suggest that this is PC-SIG software: PC Special Interest Group, based in Califomia, is a prolific organiser and distributor of public domain software, rivalled only by the New York ACC, of which I was once a member, whose PC chapter runs a similar library under the PC-Blue banner. CPL also offer pre-sorted packs of 12 disks on a common theme at £99 a time, e.g. 12 disks of communications programs. For the average user, who is unlikely to find a use for more than two disks of comms programs, this is the most expensive way of buying PC-SIG software. Of course, VAT, delivery and insurance have to be added to these prices.

Nearly as startling are the prices advertised by a firm called International Software Distributors, whose address is a post box in Sutton Coldfield. They charge £10 for a single disk though this does drop to £6 each for five or more and you can specify the disks you want by name. Shipping and VAT are extra, of course. The disks are identified by PC-SIG numbers and include well-known titles like PC-Write, Best

Utilities and Unprotect but, to judge from the library numbers, they are mostly old releases; and Unprotect, for instance, would not work with current commercial software. This makes me wonder about their advertised claim to be 'An Authorized PC-SIG Dealer'.

Any firm charging such prices for copying public domain software would have to be extremely inefficient or devious to avoid making a fat profit, thus contravening the spirit of public domain donations and flouting the specific conditions stipulated by the authors and copyright holders of the 'shareware' etc that comprises much of the best content of public domain libraries. A typical author's notice (for Freeware Games) runs: 'You are encouraged to share this program with other users on the conditions that the program is not distributed in modified form, that no fee or consideration is charged and that this notice is not bypassed or removed. If you are using this program and finding it enjoyable, or of value, then your contribution ($10 suggested) will be greatly appreciated.'

The bulk of public domain software comes from the USA and insofar as the authors of 'shareware' expect some of their users to pay up in gratitude, UK users have a reputation for meanness. It is not quite so simple however, for it is no easy matter to make a dollar remittance and both giver and receiver may meet hassle exceeding the value to be transferred. Then for the more substantial business-type programs, when a heavier payment is suggested, the deal usually includes telephone support (impractical for time differences as well as phone costs), documentation, enhancements and updates, all of which are difficult to deliver. And, as far as PC software is concemed, the Amstrad-inspired spate of cut-price offers from reputable software houses makes the suggested voluntary payments for some 'iffy' (if it works . . .) 'shareware' look rather steep.

Commercial exploitation of public domain software has not been confined to small firms. I have seen the 'Colossal Cave Adventure', surely the archetype of good public domain software, booting up with an IBM copyright logo. Of course, that could have been a fix by a joker seeking to embarrass the worthy giant but I can think of no excuse for Commodore publishing, in the early days of the 64, a 'Disk Bonus Pack' which I purchased for $30 only to find it held virtually nothing but public domain programs.

The catch in donating software to the public domain is that there is no money to defend the public domain interest against commercial predators.

--oOo--

REVIEW—POCKET WRITER 128

by Roger Spreckley

Why 'Pocket Writer'? I can only assume that it is because the 'reference guide' will fit into even the smallest pocket. Or is it that the price is easy on the pocket? The answer I am sure is both - the manual measures only 7" x 5.75" x 0.2" and the price at £49.95 for the 128 version and £37.95 for the 64 represents excellent value even without the 25% ICPUG discount available. Many may think that at these prices it can't be as good as our traditional mainstays such as Superscript, Vizawrite etc. Maybe not - but it is not far behind.

So far I have not needed the reference guide at all - I've just loaded the program and started typing. No problems as yet - the first screen is the edit mode, the menu of which, activated by the CBM key, displays a detailed and easy-to-follow menu. I have already mastered bolding and underlining by simply using CNTRL B or CNTRL U; CNTRL I switches on italics; CNTRL+ for superscripts and CNTRL- for subscript a very easy and useful facility when preparing technical reports. Having been a devotee of EasyScript and then Superscript, it is nice to see a totally uncluttered screen with none of those control characters we are all so used to. WYSIWYG (What you see is what you get) is really more or less essential in a serious WP and Pocket Writer also provides this.

At this stage I decided to see how my printer would cope with the output - not bad apart from the strangest of £ signs, and whatever happened to the italics? Ah! As with most WPs, it is obviously important to spend some time setting up the correct printer codes.

All the usual facilities found in the modem word processor are present: word-wrap, join (merge files), load, save, justify, indent etc. As we now come to expect of a competitive WP, it has a built-in spelling checker, though the need to reset the computer to use it will be a drawback to those who need to use it regularly.

My next exercise involved loading a file from Superscript, which proved to be quite simple, although in every instance it was necessary to erase the Superscript gobbldeygook from the end of the file.

I was always under the impression that these reviews were the domain of the knowledgeable who were able to delve into the innermost mysteries of the software-writer's art. I, a novice in comparison with most members, was therefore greatly surprised to be asked to report on Pocket Writer, but if I could understand and more or less master it in one evening, then surely the designers cannot have gone too far wrong.

I consider that anybody contemplating getting a word processor should consider Pocket Writer to be a serious contender.

The fact that it forms part of an integrated family, with 'Pocket Filer' and 'Pocket Planner' providing database and spreadsheet facilities, must enhance the attraction of the 'Pocket' series to the user who is looking for a useful but inexpensive business package.

REVIEW—COMMODORE 128 COMPANION

by Jim Kennedy

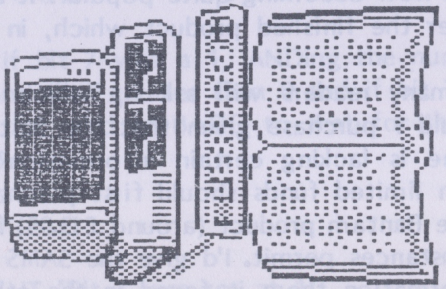
The Commodore 128 Companion is written and published by Tim Amot, the ICPUG Compunet Editor. This is Tim's second book, his previous one being published by Melboume House, I believe, though I can't find my copy to check. This, as its title says, is a companion, meant to be used frequently while programming the 128.

The first part of the book, entitled Basic BASIC, contains a very complete coverage of BASIC 7.0 commands. In fact it has the most complete discussion of BASIC commands of any book I know, more so than either Commodore's own 128 System Guide that came with the 128, the large 'Official' 128 Programmer's Reference Guide from Bantam Books, or the 128 Reference Guide for Programmers published by SAMS. Tim's book devotes almost 190 of its 340 pages to BASIC commands. If you, like me, program your 128 in BASIC and lack a photographic memory then you will need a good reference source, which this book provides. For example, not only are the parameters for the command FILTER discussed, including [freq] [,low] [,band] [,high] [,resonance], but the rolloff of each filter is mentioned. In other words this book takes that extra step beyond a simple brief description of what arguments are used with each command. To cite another example, Tim's book discusses the differences between END and STOP which most others tend to skip over.

Each command is on a separate page. The top of the page contains various bits of information about the command, along with its token, abbreviation and syntax, as well as its address in the BASIC keyword table, dispatch vector table and start. The lower portion of the page is devoted to a discussion of the command.

A short chapter on Advanced BASIC then follows, dealing with the storage of BASIC programs and variables, general memory organization, garbage collection and related topics. The next section covers machine language, using the built-in monitor, the various jump tables, and Kernal routine descriptions.

COMMODORE 128
COMPANION



Tim Arnot

Bitstream Publishing

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Finally, the last chapter discusses the 128 hardware and has sections on the RS232 Port, Serial Bus, User Port, and other important items such as the CIA, SID, VIC and MMU chips. There are three appendices consisting of a C64 mode memory map, a C128 mode memory map and an I/O map. And it also has that most useful item in any 'serious' book, namely an index.

One very nice thing about this publication is that it collects a lot of facts into a very easy-to-use book that doesn't take up half of one's desk. Some of the information in the Commodore 128 Companion is just not covered in other 128 books or guides. If you need this type of information then you really should get Tim's book. Even if you don't program in machine language but stick to BASIC you will find that the first half of the book's contents very useful and informative. I found Tim's descriptions of boolean operations the best I've read in any microcomputer book.

A couple of aesthetic items in the Commodore 128 Companion struck me. First, the back cover doesn't have the usual blurb like 'This book is the most indispensable guide for both the beginner and expert ever produced for any home computer'. The reason is that Tim Arnot is too modest to go in for such claims and as he published the book himself he didn't have to put up with some PR type insisting such puff was essential. The second thing I noticed was that the typeface and layout was much better than that used in his first one. In his first book the commercial publishing company used dot matrix output as the camera ready copy! I thought that was very naughty, the quality of print suffered and I'm sure it hurt sales as a consequence. But since Tim is now his own publisher (BitStream Publishing) he can control these items and this book is much more readable. As many will be aware, publishing your own book is now becoming quite popular: it allows authors almost total control over the finished product which, in the right hands, is a good thing.

The question many readers will ask is, 'Which of the many "guides" for the 128 should I purchase given that the System Guide that came with the machine is lacking certain information?' Well, I would say that anyone with limited funds should first purchase either Tim's book (RRP £9.95) or the Bantam product (around £13.95) followed by the other one when circumstances permit. I'd give the SAMS book (£16.95) a miss; most of the information there is found in the other two books and it has just too many errors - I wrote down 26 alone before giving up. Tim's book is available to members through the discounts officer making it even better value for money.

MEMORY MANIPULATION BY LOGICAL OPERATORS

by Joe Bowman

The logical operators "AND" and "OR", when used for Bit Masking and Manipulation, are probably the least understood aspects of programming but potentially the most useful. If you wish to inspect or change a particular memory location, you can, of course, use PEEK or POKE. However, how would you test the setting of bit 0 or set bit 7 without changing the settings of any of the other bits? This problem arises because PEEK and POKE operate on the complete 8 bits of a byte and there are no BASIC commands to inspect or set single bits. This is where the logical operators can be used for Bit Masking or Manipulation. To do this it is first necessary to understand the result of ANDing or ORing two bits (Binary Digits):

```
      1  1  0  0        1  0  1  0
AND   1  0  1  0        1  0  1  0
      ---------------   ---------------
=     1  0  0  0        1  0  1  0
```

It can be seen from the above examples that by using AND to combine two binary numbers the only time a 1 is produced in the answer is where there was a 1 in the same position in both the original numbers. Therefore:

```
          1 0 1 1 1 0 0 1        0 0 1 1 1 0 0 0
AND       1 0 0 0 0 0 0 0        1 0 0 0 0 0 0 0
          ---------------        ---------------
=         1 0 0 0 0 0 0 0        0 0 0 0 0 0 0 0
```

It can be seen that if bit 7 was a 1, ANDing the number with binary 10000000 results in a number greater than 0 and if bit 7 was 0 then the result is 0. This can be used in BASIC to test for the value of bit 7 as follows:

```
10 A = PEEK(0)
20 B = A AND 128
30 IF B > 0 THEN PRINT "Bit 7 was set at 1"
40 IF B = 0 THEN PRINT "Bit 7 was set at 0"
```

To test for other bits, alter line 20 accordingly; eg for bit 1 change the 128 to a 1.

To set one bit without affecting the others you use the OR command:

```
          1 0 1 1 1 0 0 1      1 0 1 1 0 0 0 0
OR        0 0 0 0 0 0 0 1      0 0 0 0 0 0 0 1
          ---------------      ---------------
          1 0 1 1 1 0 0 1      1 0 1 1 0 0 0 1
```

The BASIC program to set bit 0 to a 1 is:

```
10 POKE(0), (PEEK(0) OR 1)
```

To set bit 7 to a 1:

```
10 POKE (0), (PEEK(0) OR 128)
```

If you want to clear bit 1 to a 0, you need to AND all the other bits with 1 :

```
          1 0 1 1 1 0 0 1
AND       1 1 1 1 1 1 1 0
          ---------------
          1 0 1 1 1 0 0 0
```

In BASIC:

```
10 POKE(0), (PEEK(0) AND 254)
```

You can, of course, use these routines to inspect or alter any bit of any location just by changing the locations and/or values used. You can therefore wield a fine scalpel instead of the bludgeoning of PEEK and POKE.

PERMANENT MESSAGE ON THE 128 SCREEN

by David Copperthwaite

(Note from Brian Grainger: I have edited this article from a mailbox received from David on Compunet. I do not have a C128 so cannot test the program.)

The purpose of this routine is to display a permanent message on the first line of a 40-column screen. The BASIC listing (Table 1) will set up the machine code (Table 2) and execute it.

Table 1

```
10 sa=8192:dd=8231
20 read nb
30 for g=0 to nb : read a$
40 a=dec(a$) : poke sa+g,a
50 next g
60 read aa$
70 aa$=aa$+"<40spaces>"
80 aa$=left$(aa$,40)
90 for g=0 to 39
100 ac=asc(mid$(aa$,g+1,1))
110 if ac>64 and ac<90 then
    ac=ac-64
120 poke dd+g,ac
130 next g
140 sys sa
150 new
160 data 39
170 data a9,27,85,fa,a9,20,85,fb
180 data 78,a9,15,8d,14,03,a9,20
190 data 8d,15,03,58,60,a0,00,b1
200 data fa,99,00,04,c8,c0,28,d0
210 data f6,ea,ea,ea,4c,65,fa,00
220 data "          (c) d copperthwaite"
```

Table 2

```
2000  a9 27     lda #$27      2014  60          tts
2002  85 fa     sta $fa       2015  t0 00       ldy #$00
2004  a9 20     lda #$20      2017  b1 fa       lda ($fa),y
2006  85 fb     sta $fb       2019  99 00 04    sta $0400,y
2008  78        sei           201c  c8          iny
2009  a9 15     lda #$15      201d  c0 28       cpy #$28
200b  8d 14 03  sta $0314     201f  d0 f6       bnd $2017
200e  a9 20     lda #$20      2021  ea          nop
2010  8d 15 03  sta $0315     2022  ea          nop
2013  58        cli           2023  ea          nop
                              2024  4c 65 fa    jmp $fa65
```

Notes:

To change the message displayed, change the data in line 220. The program will only take the first 40 characters to use in the display. For multiple messages you will have to create your own loader using lines 60-130 inside a loop to place the data in memory. (The machine code will need changing as well since it is fixed to display a 40-column line at present - BG). The start address for the current message is stored in 250-251 in lo-hi byte format.

Queries on the program can be sent to David on Compunet Courier DC20.

--oOo--

EXHIBITIONS REPORT

by Jim Kennedy

The Commodore Show at the Novotel in November was another great success from our standpoint although some were disappointed at the reduced number of exhibitors. We took in over 200 membership subscriptions at the show, breaking the record established at Manchester. The Get-together was popular and, as I mentioned before, we plan to have them at most future shows, funds and circumstances permitting.

The Raffle prize winners for the November show were:

Winner	Prize	Donated by
Adrian Lewis	Mind Walker	Commodore Electronics
Martin Budd	Macro Assembler 64	"
Malcolm Goldberg	Easy Calc	"
Gurdeep Ranautta	Year's Free Membership	ICPUG
John Errington	Numbers at Work	Collins Soft
Jim Egan	Baby Base	Commodore Electronics
Dudley Stringer	Data Manager 128	Timeware Ltd
Andrew Korobowicz	Sideways	"
W. Brian	Swiftcalc 128	"
C. Cameron-Clarke	Future Finance	Commodore Electronics
Joe Bowman	3 Sunshine Pub. Books	"
Peter Firth	Typing Tutor 64	"
John Gardner	Easy Finance II & III	"
Lea Ann Rischbieter	2 Sunshine Pub. Books	"
Doug Lockhart	LISP Amiga Assembler	"
Michael Toms	C16 Book and 2 Games	"
John Baxter	3 Scott Adams Adventures	"

We wish to thank all the companies and individuals who donated raffle prizes in the past year. The companies donating the most prizes were Commodore Electronics Limited (CEL) and Precision Software Limited; Timeware (U.K.) Ltd, Collins Soft, Tony Firshman Services, Raeto West, Gemini Marketing and, of course, your National Committee, were also substantial donors. The total prize value was well over £1000. I know I speak for all members when I say that we are most grateful for the donations and wish them all the best in the new year.

The next show is the Commodore Show at the Novotel, Hammersmith, London, on June 12-14 and not on April 10-12 as previously announced. Always check the various Commodore magazines or either network nearer the day for last-minute changes to Commodore shows as in the past 2 years not one has been held without some sort of date change.

BRIAN'S BLUNDERINGS—AMIGA & MPS1000

by Brian Fowler

In keeping with the new alliterative house style of the newsletter, I thought 'Brian's Blunderings' had a nice ring about it, with the added advantage of being factually accurate!

Anyway, those of you who took the trouble to type in the SUBS in my original article will be delighted to hear that there is a different way of communicating with the printer. As previously explained, the Amiga uses its own internal printer control codes, which the machine then translates to suit the printer you have selected with Preferences. A good idea, and one that usually works well in practice.

There is a problem, however in that not all printer codes have been implemented by Commodore-Amiga, and this struck home recently when I was trying to use the printer to draw music staves for the children (they each received mega-decibel recorders for Xmas).

The MPS1000 code ESC "3"+n produces line feeds of n/216-inch and I thought that this would be the ideal way to produce the staves. On looking through the Amiga's printer code write-up, though, it became apparent that this particular function is not supported. However, I found that by opening a file to the "PAR:" device, BASIC passes ESCape codes straight through to the printer. As you might expect, all of this is completely undocumented in the manuals supplied with the machine!

Of course with this method, you have to be prepared to rewrite your programs for different printers, but this may not worry many of us.

The listing below shows the method I used - have fun !

```
OPEN "par:" FOR OUTPUT AS 1          :' talk direct to printer
PRINT#1,CHR$(27);"3";CHR$(14);       :' ESC code for 14/216" line feeds
FOR k = 1 TO 14                      :' we'll have 14 staves
  FOR j = 1 TO 5                     :' of 5 lines each
    FOR i = 1 TO 70
      PRINT#1,CHR$(196);             :' each line made up of 70 chars
    NEXT i
  PRINT#1,CHR$(13)                   :' CR at end of each line
  NEXT j
  FOR j = 1 TO 5
    PRINT#1,CHR$(13)                 :' to separate staves
  NEXT j0
NEXT k
PRINT#1,""                           :' empty print buffer
CLOSE 1                              :' & close file
```

SERIOUS SOFTWARE AT SILLY PRICES

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The IBM and Atari versions cost less than £75; the Commodore versions cost under £60.

Timeworks is one of the leading software publishers in America, where all three of these programs have already enjoyed enormous success with home and business users alike. The versions available here have been specially re-written for the U.K.

Each program is exceedingly easy to use, both individually or when interfacing with each other.

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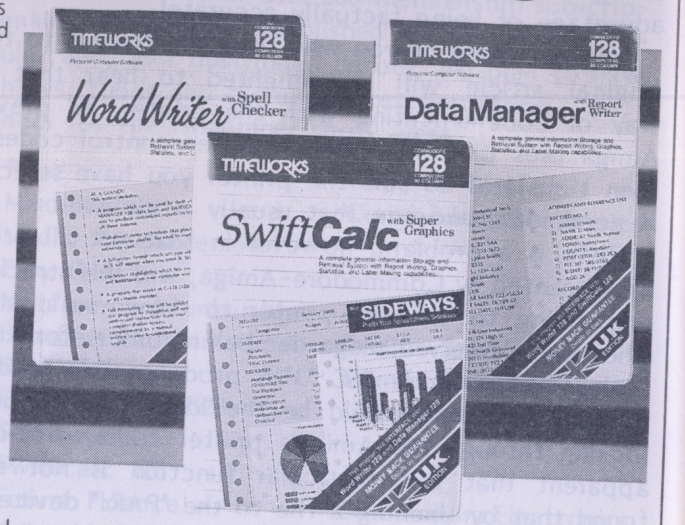
Thirdly, if at any time we update a program, you may exchange your original program for it, paying only the difference in price (if any) plus £7 to cover packing and delivery.



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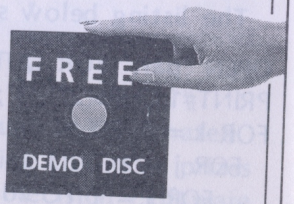

Call or write for a free disk with demonstrations of all three Timeworks programs.

Timeworks programs are now available at leading stockists. If you have difficulty in obtaining them ring our Customer Support Helpline on 0628 74678 or write to us at Timeware Ltd., 13A Russell Street, Windsor, Berkshire SL4 1HQ.

TIMEWORKS

COMAL CORNER

by Brian Grainger

January being the start of a new ICPUG year, and therefore lots of new members, means that COMAL CORNER is devoted to explaining a little bit about COMAL. At the same time I will summarise what is available on COMAL from the User Group. All the information provided here relates to COMAL on the Commodore 64, 64C and 128 in 64 mode.

What is COMAL?

COMAL is another language in which to program the Commodore 64. It can be regarded as combining the best bits of three different languages, BASIC, Pascal and LOGO, while adding some useful facilities of its own. COMAL is not to be confused with COBOL. Although both are structured languages COMAL is not a substitute for COBOL.

Like BASIC, COMAL is easy to use. You type your programs in and run them immediately. If there is a problem you can correct the program instantly and run it again. Lots of the commands in COMAL are identical to those in BASIC, e.g. DIM, FOR . . . NEXT, LOAD, SAVE etc., so it is not like starting from scratch to learn it.

Like Pascal, COMAL includes commands to write structured programs. This is encouraged in industry and now in the new Computer Studies Examinations at GCSE. COMAL implements the following structured commands:

REPEAT . . . UNTIL
IF . . . THEN . . . ELIF . . . ELSE . . . ENDIF
WHILE . . . ENDWHILE
CASE . . . WHEN . . . OTHERWISE . . . ENDCASE

In addition procedures that can be called by name rather than line numbers can be written. They will allow parameters to be passed into AND BACK OUT OF the procedure - something that even the popular BBC BASIC will not do. Variables used in procedures can be made to be recognised only within the procedure itself so that no confusion can occur with those outside the procedure.

Like LOGO, COMAL includes all the Turtle graphic commands, such as FORWARD, BACK, RIGHT, LEFT, SETHEADING, HOME, which allow easy plotting on the Commodore 64 high-resolution screen. Standard graphic commands such as PLOT, MOVE, DRAW are also included. Thus to draw

high-resolution pictures in COMAL it is not necessary to do numerous PEEKs and POKEs to set up the high-resolution screen and then draw on it.

COMAL then adds to these facilities such things as Toolkit-type commands like AUTO, RENUM, DEL. Program lines are checked for syntax errors on entry and meaningful error messages are given. Commands are added to define and control Sprites. Programs can be built up by merging previously saved routines from disk or cassette. Additional commands such as PRINT USING, SELECT OUTPUT are added as are new arithmetic operators such as MOD and DIV.

Versions of COMAL

The items listed above are in both C-64 versions of COMAL. The COMAL cartridge, version 2.01, has many more commands and facilities. Commands to control the sound on a 64 are added. You can add your own machine code routines so they form part of the language. Errors can be trapped and action taken by the user rather than always stopping the program. Additional editing commands such as FIND, CHANGE, TRACE are available. Text can be plotted on the high resolution screen in various sizes and directions. Windows can be created on the screen.

ICPUG distributes version 0.14 COMAL on disk or cassette, free of charge. This includes some initial instructions and information on COMAL as well as demonstration programs to help you understand and see the power of COMAL.

How to obtain COMAL

The COMAL Cartridge is no longer supplied by any UK dealer. Supplies are therefore only available from the second-hand market or from abroad.

COMAL 0.14 on fast-loading cassette is available from Peter Crowder, 27 Crawford Drive, Liverpool L15 8AE. Please send a cassette (at least C-60) and retum postage and packing. Please identify if you are a new user of Cassette COMAL.

COMAL 0.14 on fast-loading disk is available from myself. Please supply a disk and retum postage and packing and send to me at 73, Minehead Way, Stevenage, Herts. SG1 2HZ.

Note that postage within the UK is 26p, Europe and Eire 53p, Australia £1.69. Members outside the UK, including Eire, should send cheques in sterling or sufficient International Reply coupons to cover postage. These coupons are worth 22p each to me irrespective of how much they cost the buyer.

COMAL support

Technical support for COMAL is dealt with by myself. Send an SAE if an answer is required.

The UK COMAL Special Interest Group (SIG) is co-ordinated by myself and allows members to obtain COMAL programs from the software library. In addition members can send me their own programs for distribution within the SIG and other COMAL groups. The SIG also exists to exchange information and programs with other COMAL groups, in particular the US COMAL Users Group Ltd.

COMAL software library

It may surprise you to leam that the COMAL software library is bigger than that for BASIC! No surprise to COMAL users, as COMAL is so much easier to use and more powerful than BASIC. The following 12 disks are available right now for use with the 0.14 version of COMAL:

UK COMAL SIG 1
UK COMAL SIG 2
UK COMAL SIG 3
COMAL TODAY DISK #1/0.14
COMAL TODAY DISK #2/0.14
COMAL TODAY DISK #3/0.14
COMAL TODAY DISK #4/0.14
COMAL TODAY DISK #5/0.14
COMAL TODAY DISK #6/0.14
COMAL TODAY DISK #7/0.14
COMAL TODAY DISK #8/0.14
COMAL TODAY DISK #9/0.14

and at least three more disks are in the pipeline!

The following fifteen disks are available right now for use with the COMAL cartridge:

Cartridge Demo Disk 3
Cartridge Demo Disk 4
TPUG 2.0 Demo Disk
1520 Printer/Plotter Disk
Software Tools (3 Disks)
COMAL2.01 UKNo.1
COMAL2.01 UKNo.2
COMAL2.01 UKNo.3

COMAL2.01 UKNo.4
COMAL TODAY DISK #6/2.01
COMAL TODAY DISK #7/2.01
COMAL TODAY DISK #8/2.01
COMAL TODAY DISK #9/2.01

and at least five more are in the pipeline!

All the above disks are available in 1541 format from me. The usual conditions of sending disks and retum postage apply.

They are all also available in 8050 format from Joe Griffin (address on back cover).

Several titles from the cartridge demo disk are available on cassette from Peter Crowder (address on back cover).

I think you can see that COMAL users are well looked after!

Why use COMAL?

In the January issue of 'Personal Computer World' the Commodore 64C was reviewed as a good machine except for the fact that the Commodore BASIC was awful. It recommended COMAL from ICPUG. This was an unsolicited testimonial and perhaps is as good a reason as any why new Commodore owners should look at it.

For regular readers!

Last time I announced the new fast-loading COMAL 0.14 disk and some of its enhancements. I am happy to say that all the enhancements were added by the time of publication of the last newsletter. Anybody waiting for confirmation that the enhancements are there before asking for a copy need wait no longer!

Since last time I have received a newsletter from the Dutch COMAL Users group. This is a very prominent group which sells COMAL in both its forms for the 64 as well as CP/M versions for the Apple. They also provide useful programs. I shall finish this time with a tip from the group's Dick Klingens, which was published in 'COMAL Today'. It is written for COMAL version 0.14.

'Many different procedures and functions have been written to emulate the VAL and STR$ commands left out of COMAL 0.14. Each of these have either been simple and short (not doing fractional numbers or handling negative numbers) or complex and long (taking up more memory).

The following two procedures work using the Commodore 1541 disk drive and provide full conversion of numbers and strings while taking up

little memory space. The routines work by writing the data in one format to a buffer within the 1541 and reading it back again in the altemative format. The 1541 must be switched on for it to work, although it need not have a disk loaded.'

```
func val(x$) closed
  open file 100,"#",unit 8,2,read
  print file 100: x$
  pass"b-p:2,1"                          input file 100: y
  close file 100
  return y
endfunc val

proc str(x,ref y$) closed
  open file 100,"#",unit 8,2,read
  print file 100: x
  pass"b-p:2,1"                            input file 100: y$
  close file 100
endproc str
```

--oOo--

COMAL DISKS FOR THE CARTRIDGE AND 0.14

by Brian Grainger

The following disks of programs, etc. are available from me subject to the usual conditions. State clearly the title of the disk, particularly whether it is 0.14 or 2.01 side requested, and send a suitable number of disks and retum postage. Copies will then be sent to you.

These disks are from the USA and back up COMAL TODAY issues 8 and 9. No instructions are provided, although usually there are no problems. Refer to me (or to COMAL TODAY) in case of severe difficulties. For each issue two disks are provided. One is for use with the disk-based 0.14 version of COMAL, the other for use with the cartridge 2.01 version. There are programs unique for each version as well as some provided for both versions.

The STRUCTURE'PRG files on disk 9 0.14 version are taken from UK COMAL SIG 2 disk. This disk also includes a fast-loader (SIZZLE) which does not work outside the USA. You are strongly advised to boot COMAL from the fast-loading starter disk anyway.

```
--------------------------
ct#8-version .14" 8a 2a
--------------------------
  6   "boot c64 comal"    prg
131   "c64 comal 0.14"    prg
 12   "hi"                prg
 17   "menu"              prg
  1   ">---programs---<"  seq
 16   "art'nouveau"       prg
  2   "boot'dir'editor"   prg
 29   "colorwheel/demo"   prg
 30   "concentration"     prg
  5   "create'bats"       prg
 14   "depreciation"      prg
 33   "directory'editor"  prg
 30   "disk'edit/protct"  prg
 11   "display'seq'file"  prg
 10   "illusion"          prg
 37   "music'compiler"    prg
  5   "music'demo"        prg
 11   "seq'to'speed"      prg
 24   "sidmonitor"        prg
  3   "soundex"           prg
 11   "speed'to'seq"      prg
  7   "sprite'converter"  prg
  5   "sprite-sample4"    prg
  4   "trees"             prg
 18   "view'koala"        prg
 11   "view'sprites"      prg
  1   ">--procedures--<"  seq
  4   "comal'music.proc"  seq
  3   "loadshape.proc"    seq
  2   "saveshape.proc"    seq
  8   "sound.proc"        seq
 12   "use'sound.proc"    seq
  1   ">--data-files--<"  seq
  5   "-error-messages-"  prg
  8   "dance'hours.dat"   seq
 23   "dance'hours.sng"   seq
  5   "dir'editor.mem"    prg
  6   "dutch'errors"      seq
  7   "help.dat"          seq
 24   "information.dat"   seq
  3   "music'player.mem"  prg
 31   "musicroutine.src"  seq
  1   ">--shape-files-<"  seq
  1   "shap.'a'"          seq
  1   "shap.'c'"          seq
  1   "shap.'f'"          seq
  1   "shap.'k'"          seq
  1   "shap.'l'"          seq
  1   "shap.'m'"          seq
  1   "shap.'n'"          seq
  1   "shap.'o'"          seq
  1   "shap.'r'"          seq
  1   "shap.bat1"         seq
  1   "shap.bat2"         seq
  1   "shap.bat3"         seq
  1   "shap.harry00"      seq
  1   "shap.harry01"      seq
  1   "shap.harry02"      seq
  1   "shap.harry03"      seq
  1   "shap.harry04"      seq
  1   "shap.harry05"      seq
  1   "shap.harry06"      seq
  1   "shap.harry07"      seq
  1   "shap.harry08"      seq
  1   "shap.harry09"      seq
  1   "shap.harry10"      seq
  1   "shap.harry11"      seq
  1   "shap.men0"         seq
  1   "shap.mEn1"         seq
  1   "shap.men2"         seq
  1   "shap.queen"        seq
  1   "shap.santa0"       seq
  1   "shap.santa1"       seq
  1   "shap.santa2"       seq
6 blocks free.

--------------------------
ct#8-version 2.0" 8b 2a
--------------------------
 21   "hi"                prg
  1   ">---programs---<"  seq
 44   "beams"             prg
 18   "color'wheel'demo"  prg
 31   "concentration"     prg
  5   "create'bats"       prg
 15   "cross'reference"   prg
  6   "db'boot"           prg
 12   "db'define"         prg
  4   "db'help"           prg
 19   "db'labels"         prg
 21   "db'maintenance"    prg
 10   "db'menu"           prg
 38   "db'report"         prg
  9   "db'sort"           prg
  8   "db'squash"         prg
 12   "font'sprite"       prg
 17   "fun'print"         prg
 12   "illusion"          prg
```



```
  4   "interrupt/demo"    prg
  4   "make'data"         prg
 20   "make'err'english"  prg
 36   "make'font"         prg
  7   "morgage"           prg
  4   "run'basic'prog"    prg
  9   "scroll'message"    prg
  9   "seq'to'speed"      prg
  3   "soundex"           prg
 11   "speed'to'seq"      prg
  9   "sprite'converter"  prg
  6   "sprite-sample4"    prg
  4   "stack'space"       prg
  7   "star-zamara"       prg
  5   "statistics/demo"   prg
  6   "test'disk"         prg
  7   "test'pattern"      prg
  6   "trees"             prg
 42   "word'game"         prg
 11   "view'sprites"      prg
  1   ">--procedures--<"  seq
  2   "func.convert'bas"  seq
  2   "func.get'input"    seq
  3   "func.jdate"        seq
  2   "proc.alarm"        seq
  1   "proc.average"      seq
  2   "proc.cdate"        seq
  1   "proc.change'dev"   seq
  4   "proc.directory"    seq
  2   "proc.scroll'down"  seq
  2   "proc.sirene"       seq
  1   "proc.stand'dev"    seq
  1   "proc.toggle'keys"  seq
  2   "proc.type"         seq
  2   "proc.window'down"  seq
  2   "proc.window'up"    seq
  1   ">--data-files--<"  seq
  2   "bat.demo"          seq
  2   "bat.loop"          seq
  1   "bat.sample"        seq
  2   "comal"             seq
  1   "dat.game'names"    seq
 25   "dat.information"   seq
  4   "db'data"           seq
  6   "db'help.def"       seq
  6   "db'help.lab"       seq
  6   "db'help.rpt"       seq
  1   "db'name"           seq
  4   "pkg.basic"         seq
 28   "pkg.dutch"         seq
 11   "src.basic"         seq
  1   ">--shape-files-<"  seq
  1   "shap.bat1"         seq
  1   "shap.bat2"         seq
  1   "shap.bat3"         seq
17 blocks free.

--------------------------
ct#9-version .14" 9a 2a
--------------------------
  6   "boot c64 comal"    prg
131   "c64 comal 0.14"    prg
 13   "hi"                prg
 17   "menu"              prg
  4   "ml.sizzle"         prg
  5   "comalerrors"       seq
  0   "----------------"  usr
  0   "!copy the above!"  usr
  0   "!files together!"  usr
  0   "!to other disks!"  usr
  0   "!for the sizzle!"  usr
  0   "!    loader    !"  usr
  0   "----------------"  usr
  0   ">---programs---<"  usr
 17   "1520flag'day.14"   prg
 18   "1520max'print.14"  prg
 16   "1520polygons.14"   prg
 36   "1541'alignment"    prg
 35   "1541'align'1"      prg
 19   "1541'align'2"      prg
 18   "create'sizzle"     prg
  8   "metamorphose"      prg
  2   "program'3"         prg
  5   "program'4"         prg
 11   "seq'to'speed"      prg
 11   "speed'to'seq"      prg
 38   "structure'prg'1"   prg
 36   "structure'prg'2"   prg
 30   "structure'prg'3"   prg
 33   "structure'prg'4"   prg
 37   "structure'prg'5"   prg
 36   "structure'prg'6"   prg
 11   "waves'keybd'demo"  prg
  0   "----------------"  usr
  0   "!  procedures   !"  usr
  0   "!     and       !"  usr
  0   "!  functions    !"  usr
  0   "----------------"  usr
 17   "1520/drv.proc"     seq
  2   "decimal.func"      seq
  4   "drive'type.func"   seq
  9   "dump'1525.proc"    seq
```

```
 10   "dump1520.proc"     seq
  8   "epson'cardg.proc"  seq
  3   "load'sizzle.proc"  seq
  2   "read'errors.proc"  seq
  2   "showtable.proc"    seq
  2   "zerotable.proc"    seq
  0   "---------------"   usr
  0   "! data file   !"   usr
  0   "---------------"   usr
 11   "information.dat"   seq
  0   "---------------"   usr
  0   "!basic program !"  usr
  0   "---------------"   usr
  1   "fast'boot.bas"     prg
0 blocks free.

---------------------------
ct#9-version 2.0" 9b 2a
---------------------------
 17   "hi"                prg
  0   "---------------"   usr
  0   "! programs   !"    usr
  0   "---------------"   usr
 93   "1541'alignment"    prg
 37   "clue"              prg
  3   "convert'num"       prg
 11   "dates&julian"      prg
 29   "direct'con"        prg
 13   "gemini'colordump"  prg
 52   "icon'maker"        prg
 11   "infantry"          prg
 10   "magic'paint"       prg
 10   "oki92'test"        prg
 30   "prog'ram"          prg
  6   "program'1"         prg
  4   "program'2"         prg
 18   "rod"               prg
 36   "roll'over'basic"   prg
  9   "seq'to'speed"      prg
  2   "show'errors"       prg
  4   "single'file'copy"  prg
  9   "speed'to'seq"      prg
 16   "tank'animate"      prg
 26   "viewport"          prg
 14   "waves'demo"        prg
 48   "yahtzee"           prg
  0   "---------------"   usr
  0   "! functions  !"    usr
  0   "!    and     !"    usr
  0   "! procedures !"    usr
  0   "---------------"   usr
```



```
  2   "func.decimal"      seq
  4   "func.drive'type"   seq
  2   "func.last"         seq
  2   "func.mean"         seq
  2   "func.random'size"  seq
  2   "func.rms"          seq
  2   "func.sdev"         seq
  2   "func.sigma"        seq
 14   "proc.1520plotter"  seq
  2   "proc.convert1"     seq
  3   "proc.convert2"     seq
  2   "proc.convert3"     seq
  8   "proc.epson'cardg"  seq
  1   "proc.graph'keys"   seq
  9   "proc.show'names"   seq
  6   "proc.showproc"     seq
  1   "proc.trunc"        seq
  2   "proc.window'down"  seq
  2   "proc.window'up"    seq
  0   "---------------"   usr
  0   "! data file   !"   usr
  0   "---------------"   usr
  5   "dat.information"   seq
  0   "---------------"   usr
  0   "! packages   !"    usr
  0   "---------------"   usr
  2   "pkg.first'last"    seq
  4   "pkg.oki92"         seq
  7   "src.first'last"    seq
 12   "src.oki92"         seq
  0   "---------------"   usr
  0   "!files used by !"  usr
  0   "!   'rod'    !"    usr
  0   "! do not load !"   usr
  0   "---------------"   usr
 33   "roderigue"         prg
  9   "problems"          seq
  1   "shap.down'rod"     seq
  1   "shap.lt'rod"       seq
  1   "shap.rt'rod"       seq
  1   "shap.up'rod"       seq
  0   "---------------"   usr
  0   "! printshop  !"    usr
  0   "! pictures   !"    usr
  0   "---------------"   usr
  3   "cookie'monster"    prg
  3   "donald'duck"       prg
  3   "garf.head"         prg
  3   "goofy"             prg
0 blocks free.
```

NETWORK NEWS

by Brian Grainger (Prestel mailbox 438727925, Compunet Courier BRIAN)

Regular readers will know I normally write separate columns for Prestel and Compunet but as there is not too much news these days I intend to combine the two under one banner. The article this time is mainly taken up with outlining the facilities offered for new ICPUG members on Compunet and Prestel.

Compunet

The ICPUG area on Compunet is accessed by GOTO ICPUG. It consists of four areas with varying degrees of access. The General Area can be read by all Compunet users and is used for Special Interest Groups and as a means of promoting joining ICPUG. Special access authority is required to write to this area. Please Courier me if this is required. The Members Information Area performs a similar function except only ICPUG members can access it to read information. Such items as the ICPUG Software are placed here since we would not like to give this to all Compunet Users. Special access is also required to write to this area. The Members' Jungle is where ICPUG members can read and write. It is not accessible to the general Compunet user and it does not cost anything to place something on these pages. Finally, the Committee Area is only accessible by ICPUG National Committee members.

To obtain access to the ICPUG areas of Compunet please send me a Courier giving me your ICPUG membership number, Compunet ID and name, including that by which you wish to be called. On giving access I will Courier a reply and ultimately your name will appear on the ICPUG registered users list, unless you specifically ask to be excluded. Please note that only I can give access to the ICPUG area on Compunet so time is saved by making a request for access direct to me rather than any other committee member.

The ICPUG area is supplied free of charge by Compunet and therefore must not be used for commercial purposes.

The Editor of the ICPUG area on Compunet is Tim Amot (Courier ICPUG). Please contact him with queries, ideas for improvements, etc.

The ICPUG area on Compunet can be used to advertise unwanted equipment, get problems solved, access the specialist areas (e.g. 64, 128, Amiga, Superbase etc.), and obtain ICPUG software. If the piece of ICPUG software you want is not on Compunet, send Brian Wise a Courier (BW2) and he will endeavour to sort out the problem. All listings

provided in the newsletter are eventually placed on Compunet, which saves making all those typing errors trying to rekey them.

Because Compunet is not suitable for browsing around quickly, the 'New Pages Directory' in the Members' Jungle is used to identify any new pages uploaded. If you want us to find any of the pages you have uploaded then you are advised to put an entry in the new pages directory.

Prestel

You can get to the ICPUG pages on Prestel by *8102132#. When keyword search is available on Prestel, *ICPUG# should also work. Currently the pages are not in a Closed User Group and anybody can read them. Be advised however that they may in due course be placed in the Prestel Microcomputing CUG (due to circumstances beyond our control). It will also be necessary to be in this CUG to download any 64 software from ICPUG or elsewhere. The software, which requires MUSTANG terminal software to download, is administered by Solely 64, which is only accessible within the CUG.

The ICPUG area on Prestel contains general Commodore news, an index to N/letter back issues, and info about regional groups, discounts etc.

The ICPUG area on Prestel is edited by Jim Clavier. All queries, suggestions for improvements and so on should be mailboxed to him (Key 7 from any ICPUG page).

For regular readers

Not much to say about Compunet at the moment. It is sometimes slow, sometimes fast, mostly the former. I tend to access Compunet once a week now with a visit to the areas on which I keep an eye, and then to leave as soon as possible. Even this not uncommonly means being on for over an hour.

On Prestel Jim Clavier has started to add his personal touch to the ICPUG pages. I am leaving him to do most of the work now but I shall still be able to edit pages and I can still be contacted on my usual mailbox number.

I am not sure whether it is open to all Prestel readers but there is some interesting information on Keyword Search facilities provided on *1900#. I cannot wait to have this facility on Prestel.

Finally I would be interested in knowing how many of our members are registered on Microlink/Telecom Gold. Personally I am not on Telecom Gold yet but Richard Wilson is keen to see a user group in this area. Send me a Prestel mailbox if you are registered. Thanks.

cavendish commodore centre

66 London Road
Leicester LE2 0QD
Tel: (0533) 550993

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Timeworks:- Word writer, Data Manager, Swift Calc, and Sideways now available for the 128.

Large range of books for all machines.

Contact us for all your computing needs.

We are only 100 yards from the Leicester Railway Station.

Drop in for a coffee and a chat.

REGIONAL ROUND-UP

Having sent out over 150 letters to Regional Organisers and a request for information in the last newsletter and received only 10 replies, I am wondering if ICPUG have any affiliated clubs left. So, even if you are not a Regional Organiser, and your club is not listed, please contact me with details of your club.

BASINGSTOKE: Colin Smith (0256 55262) informs me that they they are going strong with a membership of 35, meeting on the first and third Mondays at Hill Rise Hall, Bach Close, Brighton Hill, Basingstoke at 7.00 to 10.00pm.

DERBY: Ray Davies (0332 514016). They meet at Derby Professional Colour, Sandown Road, off Ascot Drive, Derby, on the second and fourth Tuesday at 7.00 pm.

LIVERPOOL: Peter Green (051 548 2828). They meet at 8.00pm every Wednesday during school term at Cardinal Heenan School, Honeys Green Lane, Knotty Ash, Liverpool. Activities include COMAL, wordprocessing, Superbase, Music, and there is also a library of books and disks. Many thanks for your good wishes.

MINISTRY OF DEFENCE: Colin Deeley has been posted to Belgium and will be handing over to Wg/Cdr John Jeffrey on the 26th of January, so we wish him well with his posting, look forward to John joining us, and hope to see a new regional group in Belgium!

NORTH GLOUCESTERSHIRE: Robin Harvey (0242 527678). Meeting place: Cheltenham Ladies College, Archway Entrance, St George's Road, Cheltenham, on last Thursdays of the month (except in school holiday periods) from 7.30 to 11.30pm.

NORTH HANTS: Ron Geere (0256 26830). The club now meets at Vic Winstanley's house at 62 Queens Road, Famborough, on the third Wednesday of each month at 7.30pm.

NORTH HERTS: Brian Grainger (0438 727925) writes to tell me that they now meet on the last Wednesday of each month, 7.30 to 10.30pm, at the Hertford Road Community Centre, Hertford Road, Kenilworth Close, Stevenage.

POOLE: Douglas Shave (0202 700428) informs me that they are still going although reduced in number, and meet from time to time in members' homes.

PRUDHOE-ON-TYNE: Rob Christer (0661 35507) says they do not have a regular meeting date, but still meet once a month in the Concert Room of the Prudhoe Conservative Club, and arrange their meetings to suit their members, most of whom are shift workers.

SCARBOROUGH: Tim Carruthers (0273 353550). Meetings at The Scarborians Sporting Club, Market Street, Scarborough. They are 20 members strong, mainly adults, and like all good Commodore owners they discuss equipment and software and help each other on bug hunts.

SHEFFIELD: Phil Hicks (0742 420550) is starting up a new Sheffield group and hopes to hold monthly meetings; currently they have about 14 members and are looking for more to join them.

SLOUGH: Brian Jones (0734 66194). They meet at Slough College of Higher Education, Wellington Street, Slough, on the second Thursday of each month from 7.30 to 10.00 pm. Many thanks for the newsletters.

SOUTH EAST: Brian Wise (01 668 3017). The club meets every Thursday, except the first in the month, from 7.30pm at Charles Darwin School, Jail Lane, Biggin Hill, Kent, and at Biggin Hill Library when the school is closed. At the last meeting before Christmas members turned up with seven-and-a-half Amigas and so John Bickerstaff has arranged a teach-in once a month for members to get help with Amiga-DOS and perhaps C. We also hope that Father Christmas turned up with the other half of the half-Amiga.

WOLVERHAMPTON: T. Earp. Meets now at Bilston Community Centre, Pounds Lane, Bilston on the first and third Tuesdays each month.

Brian Wise
Regional Organiser

ANNUAL GENERAL MEETING

The AGM has been arranged for 16 May. Those who hope to attend should make a note in their diaries. The place has yet to be fixed, and will be notified in the next Newsletter.

C64 ARITHMETIC - CORRECTION

In the Nov/Dec '86 issue of the Newsletter the article on page 517, 'C64 Arithmetic', was attributed to Robin Harvey when the author was in fact Eddie Syratt. Both these gentlemen write excellent articles for the North Gloucestershire Group Newsletter, and we then 'borrow' them for the National Newsletter [and muddle up the authors!].

If you wonder why the North Glos Group often have material published, it's not just because it's good but also that they bother to send a copy to the Editors.

--oOo--

ICPUG SOFTWARE LIBRARIES

A great deal of uncertainty seems to exist, particularly amongst newer members, about what the software libraries contain, how members can obtain access to them and how much it costs to use the service.

Who run the libraries

The libraries are operated (as are virtually all aspects of ICPUG) on an entirely voluntary basis. The library organisers and librarians/copiers all operate in their own time, unpaid and in most cases using only their own equipment, although it has been agreed by an AGM that any repair costs arising from use of equipment for ICPUG would be reimbursed.

Our library organisers co-ordinate the libraries for the various machines. We receive, examine and (if suitable) incorporate any new material into the library. For the more popular machines, groups of librarians provide disk or tape copies on request from the members, while for the older, or more specialist machines, the organiser also acts as librarian.

Contents

The libraries contain PUBLIC DOMAIN programs from a wide range of sources, including our own members and other user groups. ICPUG does not support software piracy, so they do not contain 'unprotected' copies of commercial programs or other copyright material. None the less, there are a great number of very good programs available from a wide range of sources.

What members may obtain

Quite simply, members may obtain ALL the library material. In order to retain a measure of control over the work load on the librarians, however, we do restrict the amount of material that may be obtained by any one request.

Disk users may obtain up to two disk copies at a time (some libraries allow more)

Tape users may obtain up to four programs, from any one disk.

These are general guidelines, if you have any queries, contact the particular Librarian or Tape-Copier (enclosing an SAE for the reply) to obtain specific details of what he/she offers.

What it costs

Unlike many of the American User Groups, ICPUG does not charge any copying fee. We do, however, require that you supply the material onto which the copy will be made and also that you supply packaging and postage for the return.

Please do not send the cost of postage to us, send stamps. We all give up our spare time to provide your copies, which means we have less time for our own computing. In particular, we are not post offices and do not carry a stock of stamps. If you send us money, there is likely to be a delay until we are passing a Post Office.

Naturally, we make an exception for Overseas members, who should send International Reply Coupons or a cheque/money order (in Sterling, drawn on a UK bank) to cover the amount of material sent. Please note that non-Sterling cheques etc, cost more to cash than the postage and IRC's are not worth what they cost you! For example in Eire an IRC costs 72p; to us it is only worth 22p. As a general guide, send a minimum of one and a half IRC's per disk.

The libraries

A list of the Librarians/Copiers is given inside the back cover, but some amplification of the system may be of use to newer members. In particular, if we know what machine you have, we will supply you with the latest information on your library.

For ALL the libraries we are establishing catalogue disks, which will contain at least a copy of the directory of each disk. Most of the catalogue disks will contain text files describing the operation of the programs on the disk.

NB. No printed copies of the catalogues are available.

'PET' library - organiser: Joe Griffin

At present over 40 disks are available in the PET library.

In 4040 format, two catalogue disks are available, containing the lists for the CBM Workshop disks and the ICPUG disks, respectively. On 8050s, these are all on one disk. For tape users, I am prepared to dump the two 4040 disks onto two C-60 tapes (though I cannot promise the same speedy turn-around that I try to maintain with the disks.)

VIC library - organiser: Brian Wise

Three disks of material are available. (Copies on 8050/8250 disk from Joe Griffin.)

C64 library - organiser: Andrew Hartley
14 disks currently available. A number of disk/tape copiers dispense the material from this growing library. Please use the copier who deals with the first letter of your surname. (Overseas copies and copies on 8050/8250 disk from Joe Griffin.)

Plus 4 (and C16) libraries - organiser: Richard Hunt
At present three partially filled disks are available. If anyone has material suitable for the library for these two machines, we would be pleased to receive it. Please contact Richard, with full details.

128 Library - organiser: Tony Harrison-Smith
Again a team of copiers distribute the 128 library. Please note that this is for 128 mode and CP/M material only. C64 mode material is available from the 64 library in the usual way. Public Domain CP/M material is also available on 1541 format disks for the 64 with Z-80 cartridge.

PC library - organiser: Peter Reynolds
A year ago, I asked 'Is anyone out there interested in an ICPUG PC-library?' There are now about 100 disks in the PC Library and the list is growing rapidly. This library is distributed by a team, but here the division is by subject. Pete Crowder holds the ICPUG Catalogue Disk.

Amiga Library - organiser: Mike Todd
Our newest library also has about 100 disks. These are divided into four main groups: ICPUG (Filleted Fish); Fish; AMICUS and Demos.
Notes on sources of disks appear elsewhere in this newsletter.

In addition to the machine-specific libraries, there are two Special Interest Groups (SIGs) within ICPUG, each of which has its own program library.

COMAL - organiser: Brian Grainger
Support for all versions of COMAL from BASIC 2 to 128. Much material available especially for Versions 0.14(disk) and 2.01(cartridge) for the 64.

1520 Plotter Group - organiser: W G C Austin
Specialist group within ICPUG, trying hard to expand support for the plotter. One disk currently available.

Obtaining copies of library material
To obtain copies of catalogue or library disks, please send:

A statement of what you want
Disks (max of 2 - except Amiga) stating format required or Tape
Re-usable packaging suitable for return
Pre-addressed label for return
Return postage (in stamps!)
Please include your membership number.

DPG

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PC LIBRARY

This is being written shortly after the last Newsletter appeared, detailing the first 65 volumes and asking for feedback, so it is not surprising that little has arrived yet. Twenty-three disks have been added and are listed here; when the catalogue disk (00) is ready you will be able to see additional information, including which disks have been acclaimed and which are earmarked for dropping from the ICPUG collection.

One member reports using a database from the library 'for real', sorting and analysing 4000 records. PC-File was insufficiently documented to be much use but File Express, on disks F23 and 24, worked like a charm. Incidentally the data file on F16, while intrinsically pointless, is invaluable for testing a database before you invest the effort of entering your own data. PC Write now comes on two disks and includes a spelling checker; reports are mixed and we could clearly do with a less complex wp program in the library. Disk W77 attempts to fill that gap but the present version is frail; can anyone offer something better? W19, PC Spell has also disappointed and is temporarily withdrawn: check with David Harrow if we get a better copy.

Anyone with a hard disk system and no 'park' utility (like my Amstrad) should try D76 for a program to position the heads safely when the machine is moved. ICPUG members will not expect much musical delight from R82 but the disk is not to be despised because it illustrates the use of a .BAT file to make a program very user-friendly for the novice who is confronted with instructions to copy the disk before he starts to use it regularly. A lot of commercial software houses could learn from that example.

Peter Reynolds

--oOo--

PUBLIC DOMAIN SOFTWARE/FREEWARE FOR THE AMIGA

On page 553 of the last newsletter under the heading of AMIGA LIBRARY you were advised that we held copies of some 40 disks of Public Domain software and Freeware and were invited to send an SAE for more details. Copying of these disks is being offered as a service to members (there are now 40 Fred Fish disks, 10 Amicus disks and 18 demonstration disks available).

A directory disk has now been compiled which contains four drawers, each drawer containing a number of (double) 'click me' icons. These display the directory of the relevant disk. A copy of this directory of directories disk may be obtained by sending a blank 3.5" double-sided disk together with return postage, packing and self-addressed self-adhesive label to me. Instructions on how to obtain copies of these Public Domain software and Freeware disks will be sent with this directories disk.

John Bickerstaff

(Please note that the ICPUG Amiga Library disks caringly prepared by Mike Todd, our Amiga Librarian, can be obtained directly from Mike. See inside front cover for our addresses.)

STOP PRESS/USE UP LAST INCH OF WHITE SPACE DEPT

Kare Paulsen, Faerders gt. 62, N-1700 Sarpsborg, Norway is looking for disks and manuals for Nevada Fortran and Turbo Pascal for C64 CP/M. Can anyone help?

AMIGA SUNDRIES

Brian Fowler edits an 'Amiga Forum' in the ICPUG area of Compunet, accessed by goto 208623.

An anonymous correspondent, who is presumably a member, writes that he and five other Amiga owners have formed a user group (Amiga User Group, 14 Parkstone Ave, Horfield, Bristol, Avon) who would be interested to 'exchange knowledge' by letter. The writer promises to address the Editor further in due course: in that case he should include his name and membership number.

C128 LIBRARY

Introduction

The C128 library has been running for one year now. We currently have available 10 disks of programs with more being added regularly. The library is divided into two sections: the first has programs for use in the C128 mode, the second for CP/M mode. All the CP/M disks are also available in a suitable format for use with the C64 and Z80 cartridge. These disks are only available from Tony Harrison-Smith, address below.

All the disks supplied from the C128 Library (including CP/M disks) have been written on single-sided disks so that they can be read by 1541, 1570 and 1571 drives. Disks for the 8050, 8250 should be sent to Chris Wright, address below.

Submitting software

We are always very pleased to receive software from members to add to our library. Remember it is you, the members, who either make or break a software library. The programs should not be copies of commercial programs as this is piracy. Please test the programs before submitting them as time is precious in this job. Send your programs on a disk or tape with instructions how to use them either as program or SEQ files. Send the programs to Tony Harrison-Smith and please allow at least 4 weeks for the return of your disks.

Index of disks available

C128 Mode

Disk G1 - General programs
Disk G2 - General programs 2
Disk S1 - Superbase/Superscript 'Superdesk'
Disk S2 - Superbase 'Superstock'
Disk S3 - Superscript accounts

CP/M Mode

Disk CL1 - CP/M Language 'Small C'
Disk CL2 - CP/M Language 'JRT PASCAL v2.0'
Disk CL3 - CP/M Language -PASCAL manual
Disk CR1 - CP/M Recreation Programs 1
Disk CU1 - CP/M Utilities programs 1
Disk CU2 - CP/M Utilities Programs 2
Disk CU3 - CP/M New version + Utility programs
Disk CU4 - CP/M Utility Programs 4

DPG

DISCOUNT CORNER

Our discount team includes Derek Hoare, David Murray, Brian Wise (stocks) and myself (John Bickerstaff). We wish you all, new and renewing members, a Happy Computing 1987.

General information
Most discount offers are only available to UK members. Overseas members are requested to write to me first before attempting to place any orders. Information on discounts appears in this regular spot - we do not provide lists of discounted products. Please remember it is often worth a 'phone call to me before you buy. Call after 8.30 pm weekdays (or leave a message), thanks.

CBM hardware is available to members at discount rates. If you are interested, telephone me or write to David Murray (enclose a stamp for his reply).

Adamsoft, contact David Tomkinson, 18 Norwich Ave, Rochdale, Lancs OL11 5J2, allow members discounts of 20% on ABACUS and 10% on many other suppliers including Supersoft. Call David on 0706-524304.

Bitstream Publications produce the 'Commodore 128 Companion' written by our own Tim Arnot. Cover price £9.95 price to members £7.95 .Send your cheque quoting your membership number to Bitstream at Flat 3, 26/28 Osborne Road, Southsea Hants PO5 3LT.

Brain Boxes, Unit 3G Wavertree Technology Park Liverpool L7 9PF ('phone 051-220 2500) allow 15% discount on their products. Their IEEE interface is switchable and suitable for the C128 and C64 @ RRP of £69.95, RS 232 interface for C64 or C128 @ RRP of £49.95 and user port to centronics printer cable @ RRP of £19.95. Please add VAT to all prices after deducting 15% discount.

C.W. Systems 37 Cecil Street, Lytham, Lancs, FY8 5NN. THE LAST ONE for the 64 (or 128 in 64 mode) is £31.00 to members (RRP £57.50) and Hints & Tips book is only £5 to members - both prices post-free.

Cassel plc have taken over the distribution of Compute books from Holt Saunders. Members' special discount of 30% on cover prices (no extra for postage) is being continued and your new contact is Mr. Jonathan

King at Artillery House, Artillery Row, London SW1P 1RT. Send your orders to him direct stating your current membership number or call him on 01-222 7676 with your enquiries.

Cheetah Marketing Ltd, 1 Willow Brook, Science Park, Crickhowell Road, St. Melons, Cardiff 'phone 0222-777337 supply Interpod, an IEEE interface for the C64, at a special net price of £54.95 directly to members.

Collinsoft, 8 Grafton Street, London W1X 3LA, 01-493 7070 (contact Roy Davey) are offering their C64 product 'Entrepreneur' to members at £14.95 (RRP £19.95) for the cassette or £19.95 (RRP £24.95) for the disk version on direct application.

Gerald Duckworth & Co.Ltd, 'phone 01-485 3484 (contact David Lines) allow 10% to members on their products (books and software) please call them for more information.

Tony Firshman Services 12 Bouverie Place, London W2 1RB (01-267 3887) allow 5% on their mains cleaners so the net prices are £13.20 for the single and £22.80 for the four-way unit, order directly from Tony.

First Analytical Ltd, distributors of GEOS, 6 Newcomen Street, London SE1 1YR have released GEOS version 1.3 (now with 2 master disks and a different protecting system) which may be purchased directly at £39.95 when you quote your 1987 membership number. Some new programs are now ready. Font pack £18.80, Desk Pack £21.20 and Writers Workshop, Geo Calc and Geo File at £30.00 each to members.

Grafsales Ltd Unit 8, Derby Works, Carey Place, Watford, Herts, WD1 2LR allow 20% discount on their GRAFPAD II on direct application to Mr. G. Roll, 'phone Watford 43942.

H & P Computers, 9 Hornbeam Walk, Witham, Essex CM8 2SZ, 0376-511471 (contact George Lloyd) will supply their FINAL CARTRIDGE II (RRP £39.00) directly to members at £35.00 each (no discount on upgrades).

Haba Systems Ltd distributors of Digital Solutions Inc products supply Pocket Writer, Pocket Planner and Pocket Filer at £29.96 each for the 64 and at £37.46 each for the 128. Please add £1 per program for postage. These programs are integratable on the relevant machine. The

dictionary for the Pocket Writer is £14.96 to members. Send your cheques to me made out to Haba Systems Ltd with your order and an 18P stamp.

Impex Designs (UK) Ltd of Metro House, Second Way, Wembley, Middlesex, HA9 0TY allow members on direct application a 10% discount on their products, which include accounting software. Contact is Mr G. Barnett on 01-900 0999.

JCL Software 1 Sheffield Road, Southborough, Tunbridge Wells, Kent TN4 0PD ('phone 0892-27454) contact Jackie Leman, allow 15% discount on their products, which include their IEEE interface for the C64, CBM assembler on disk for 64, 128, and +4, HS-64 Assembler Cartridge, Microclerk, EPROM programmer MK3 and Speedipen; you should place your orders directly with JCL.

Microtext offer their teletext adaptor to members at £64.95 including postage and packing. Contact Terry Cassell for details on 0705-595694 or write to 7 Birdlip Place, Horndean, Hants PO8 9PW.

Precision Software Ltd allow members on direct application a discount of 25% on their own software. Other products are subject to 10% discount. Please state your membership number when calling them on 01-330 7166 or writing to them at 6 Park Terrace, Worcester Park, Surrey KT4 7JZ - they accept some credit cards.

Screens Microcomputer Distribution, Main Avenue, Moor Park, Northwood, Middlesex, 'phone Northwood 20664, give 15% discount on the Super Graphix printer interface for the VIC, C64 and C128 machines. Credit cards accepted. Contact Nigel Sinclair.

Systems Software (Oxford) Ltd 16B Worcester Place Oxford OX1 2JW will supply their advertised products at 20% discount to members. RRP's for the Oxford Pascal Compiler £34.95 on disk or £22.95 on tape for the 64 and £49.95 for the 128 - Petspeed Basic £19.95 for the 64 and £49.95 for the 128 - Hackpack for the 128 £39.95 - Oxford Basic for the 64 £34.95. A new product for use with the 1750 and 1700 RAM cartridges called RAMDOS is now available at £34.95. Please send your orders (deduct 20% first) direct, quoting your current membership number; there is no extra for postage. Enquiries to Michael Cech on Oxford (0865) 54195.

Trojan Products allow members on direct application their Cadmaster Pack at £17.95 (£2 off). Write to them at 166 Derlwyn Dunvant, Swansea, SW2 7PF.

Timeware Ltd, now at 13A Russel Street, Windsor, Berks SL4 1HQ, provide Word Writer, Data Manager and Swiftcalc for the 128, which programs can be integrated, at £44.63 each and Sideways for 64 or 128 at £23.96 to members. A demo disk is available directly from Timeware but programs should be ordered through me with cheques made out to Timeware Ltd - include an 18p stamp, please.

Transworld Publishers' new prices are £12.00 for the C128 Programmer's Reference Guide and £12.80 for the AmigaDos Manual. Send your cheques (made out to Transworld Publishers with your membership number and address on the back) to me with your order and an 18p stamp.

Viza Software Ltd., 54 High Street, Maidstone, Kent ME14 1SY (phone 678169) offer Vizawrite £46.00 (£56.00 on Cartridge), Vizaspell £36.00 or both programs on one disk £65.00 and Vizastar XL4 £65.00 or XL8 £84.49 includes cartridge and disk - all for the C64. Vizawrite Classic (including spelling checker) and Vizastar are available for the C128 at £65.00 and £84.49 respectively, both include cartridge and disk. No discounts on upgrades. EDNA - this Editor/Assembler/Monitor is a professional's development system for the C64 and is available at £41.97 to members. Call me for the low, low price on Vizawrite for the PC. Viza's Desk Top for the Amiga will sell for £97.45 to members. Please place orders through me with cheque (made out to Viza Software Ltd) and enclose a stamp.

John Wiley & Sons, Baffins Lane, Chichester, Sussex PO19 1UD, give discounts of 20% to 30% (books and software); contact Miss Huff on 0243-784531.

WORDCRAFT wordprocessor for PETs, 64 or PCs, contact our Editor, Hugh de Glanville, address inside front cover.

Y2 Computing are now at 111 St. Albans Road, Watford, Herts WD1 1RD. They offer 15% on all their products except their program Ruby Comm for the Amiga, on which they offer a special price - call me for this.

COMPUNET discount pages - GOTO 197324.

CLUBSPOT discount pages 810213280 a/f.

JB

READERS WRITE . . .

POCKET WRITER 128 AND THE DPS1101

John Saunders, 64 Middle Mark, Bulwark, Chepstow, Gwent NP6 5QS has a tip that complements Roger Spreckley's review of Pocket Writer 128 on p 53:

Having recently got Pocket Writer 128, I would like to pass on a small tip to any members who may have had difficulty in getting it to print correctly with a DPS1101. When I first tried, I set it up to print CBM ASCII, which had suited the W/P and spreadsheet I had used before, but this results in only caps and numerals being printed, lower-case letters are missing. I eventually found that setting switch 3 on DIP SW1 to ON, enabling the printer as a standard ASCII printer solves the problem. I hope this may help others: I find the program very easy to use yet having all the features of a good W/P at the touch of a key.

GEOPOLITICAL EFFECTS

AH Potten, who wrote about GEOS last time under the heading 'Geopolitics', says:

Many thanks for publishing my letter - I received a telephone call from Sheffield and two letters offering kindly advice and assistance. Also First Analytical did send me a program to enter to convert the US clock to UK. I am still somewhat aggreived at having been sold a US version in the first place; it has no £ sign, for instance. I am awaiting a £2 update disk - and wondering just what it will update.

C Cameron-Clarke, of Portland, Dorset, wrote in to support GEOS. He has been using it happily since he bought it at the Xmas Show and will be buying more GEOS disks. He thinks Brian Grainger's review was very fair.

LINGUISTICS

Thomas Wright, c/o School of Radiography, John Radcliff Hospital, Oxford OX3 9DU asks:

As a home computer user (not professional in anyway) I am trying to design and write a computer language to combine the best features of a lot of existing languages. If anyone out there who uses languages other than BASIC, machine code, and C, would like to get in touch with me and offer any suggestions on design or implementation, I would be grateful, especially if they speak Lisp, Pascal, or Prolog, with which I have no experience. Once complete, the new language will be given to the ICPUG library.

POLYGONAL

and on the same theme, Phillip Dunstall, 11 St Mary's Rd, Horsell, Woking, GU21 4PR adds:

I see that you have a Pascal and a Comal Corner: what about giving other computer languages - Ada, Algol, APL, Assembler, BCPL . . . [his list covers four lines] corners too? Can you publish this in the magazine to give the Group ideas in computer languages?

EDITORIAL BLUSH DEPARTMENT

Jill Dick rhymes from Chapel-en-le-Frith to tick us off for careless Latin:

Dear Mr Editor:/Page 563 ICPUG,/Forgive me for mentioning/Your Latin headline's bug./ 'Caveat emptor'/ Might warn an acquisitor,/ But two or more is/ 'Caveant emptores'.

FOR SALE & WANTED

FOR SALE

COMMODORE 715 (256K) with 8250 drive (2Mb) and 1361 (136-col, 150cps, heavy-duty) printer, all cables, manuals and Superscript II; little used and perfect. Sale because of relocation. Lionel Tun, tel. 01-928 3065 (evenings), 01-407 7411 (daytime)

C128D/1901C colour monitor (40/80-col) £575; 1526 printer £90, all in original packing. Superscript 128 (40/80-col) £40; Superbase 128 (80 col) £40; The Consultant database (40-col) + Geminin database (40-col), £25 the two; Gemini accounts software inc. Cashbook, Final accounts and VAT analysis; original disks and compiled disk, £50; approx 30 disks (10 d/sided, d/density); about 11 books incl Rae West's 'Programming the 64 with disk tricks and tips on the 128, programmers ref manual &c &c; all the above programs with instruction manuals. £820 o.n.o for the lot (VAT included). Pete Miles, tel. 0297 60339 (Dorset)

SFD 1001 disk drive (fast, 1Mb) for C64, with own power supply and Brain Boxes (IEEE) interface, Utility and Superbase v2.3 disks, all perfect. £195. Nick Tregenza, 0736 763417 (evenings - Penzance)

3032/4040 (3040 ROMs) + cable, £295. Vic Loughran, tel. 0293 21720 (Crawley, Sussex)

More PET oddments: BSR mains-bome switching system (110 volts) comprising controller, 7 receivers, software, also 60 Hz clock, £95. Remaining items: Votrax voice synthesizer £30; 3 2-way ROM boards £5 each (with BASIC 2 ROMs free if required); Original 64 software at £8 each: Wordpro 3 plus; Doodle; CPA (Complete Personal Accountant, USA style); Omnicalc (spreadsheet & graphics); Clone machine (disk copier, £5). 64 hardware interfaces (unused) at £20 each:- JCL IEEE-488 v4.1, Omnitronics RS232. 1520 plotter/printer (110 volts) £20; similar Tandy device (240 v, centronics & RS232 600 baud) £35. All items plus postage and packing. Send SAE for list of books and other items for PET and 64. Peter Reynolds, 65 Claremont Road, Tunbridge Wells, Kent TN1 1TE. (Tel 0892 26016)

2032 upgraded by Microport to switchable 40/80 cols. Fault in PET or VDU or both (serious or trivial - buyer's problem), for sale as defunct, or could put it back to BASIC 2. Will sell 80/40 stuff separately. Also 4023 tractor/friction printer. Walter Green, tel. Basildon 22430

SEIKOSHA GP-100A MkI graphic printer, fitted with IEEE interface, exc. condition, with cable, manual, ribbons, £90 o.n.o. John Rolfe, Orchard House, The Thorpe, Hemingford Grey, Cambs PE18 9DA, tel. 0480 63493

PRACTIFILE versatile database for C64 - up to 3800 x 250-character records; excellent handbook. Richard Sherrington, tel. 01-959 5049 or 01-906 1631

VIC20 SOFTWARE - last chance to acquire top quality program cartridges: Super Expander; Programmer's Aid; and Machine Code Monitor. Also available: Vicwriter; Vicfile and Simplicalc - unused and unopened packs. Send s.a.e. to Richard, 27 Saddlescombe Way, London N12 7LS

New PAPERCLIP (twice used only), 64/128 versions, £30 o.n.o. Contact Dave Thornton, 46 Balmerino Rd, Douglas, Dundee DD4 8RR, tel. 0382 42437

WANTED

KOALA PAD for C64. Contact FM Poland, 58 Tan Yard Brow, Manchester M18 8UJ, tel. 061-223 3306

DPS1101 TRACTOR FEED - or has anyone found a way to keep continuous paper straight? Michael Hulme, tel. 0939 290516 (Shrewsbury)

8032 and 4040 MANUALS - Peter James, 61 Larkspur Ave, Hammerwich, Walsall WS7 8SR would like to buy, beg, or borrow some

COMAL CARTRIDGE manual - Arthur Blinkhorn, 66 Shakespeare Drive. Kidderminster, Worcs DY10 3QY (tel. 0562 740270) has acquired a cartridge but virtually no manual - he lacks Chs 1,2,3,4, 6. Has anyone a spare, or can they lend him one to copy?

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194	May	Editor's Notebook - Data Protection Act	deGlanville
454	Nov	Editor's Notebook - databases and Amiga Superbase	deGlanville
282	Jul	Editor's Notebook - editorial assitance needed	deGlanville
98	Mar	Editor's Notebook - EGM	deGlanville
358	Sep	Editor's Notebook - ICPUG and the AGM	deGlanville
282	Jul	Editor's Notebook - quality & standards	deGlanville
339	Jul	Education - Open University computer courses	Reynolds
108	Mar	EGM 10th May 1986 - brief note	Kennedy
220	May	EGM 10th May 1986 - report on	Todd
37	Jan	Entrepreneur - review	Kennedy
43	Jan	Exhibitions - Commodore - May86 - details	
107	Mar	Exhibitions - Commodore - May86 - details	Kennedy
308	Jul	Exhibitions - Commodore - May86 - raffle result	Kennedy
222	May	Exhibitions - Commodore - May86 - report	kennedy
108	Mar	Exhibitions - EGM - May86	Kennedy
107	Mar	Exhibitions - get-together at Commodore May86	Kennedy
8	Jan	Exhibitions - Horizons - Feb86 - postponed	Kennedy
8	Jan	Exhibitions - Horizons - Nov85 - raffle result	Kennedy
7	Jan	Exhibitions - Horizons - Nov85 - report	Kennedy
107	Mar	Exhibitions - Horizons - Nov86 - dates	Kennedy
402	Sep	Exhibitions - Horizons - Nov86 - details	Kennedy
472	Nov	Exhibitions - Horizons - Nov86 - raffle result	Kennedy
472	Nov	Exhibitions - Horizons - Nov86 - report	Kennedy
107	Mar	Exhibitions - Horizons - Sep86 - dates	Kennedy
309	Jul	Exhibitions - Horizons - Sep86 - details	Kennedy
107	Mar	Exhibitions - ICPUG appearance in 1986	Kennedy
107	Mar	Exhibitions - PCW - Sep86 - dates	Kennedy
308	Jul	Exhibitions - PCW - Sep86 - details	Kennedy
400	Sep	Exhibitions - PCW - Sep86 - report	Kennedy
351	Jul	Five Years ago	Geere
139	Mar	Flight Simulator II - book and some comments	Harvey
273	May	FORTH - user group - C64 White Lightning	Amot
256	May	Freeze Frame - C128 fix	Foster
560	Nov	GEOS - problems with	Potten
444	Sep	GEOS - review	Grainger
16	Jan	Germany - news from	Tilford
455	Nov	Graphics - Mandelbrot set	Syratt
451	Sep	Hardworks - warning	Richards
47	Jan	HAZE - running 8-bit CP/M s/w on 16-bit m/cs	Reading
41	Jan	ICPUG - 1985 membership figures	
511	Nov	ICPUG - 1987 membership renewals	Kennedy

495	Nov	ICPUG - Closed User Group on Compunet	Grainger
338	Jul	ICPUG - Committee vacancies	
3	Jan	ICPUG - facilities available	Todd
3	Jan	ICPUG - introduction for new members	Todd
6	Jan	ICPUG - National Committee 1985/6 (updated)	Todd
505	Nov	ICPUG - National Committee 1986/7	Kennedy
540	Nov	ICPUG - New Regional Organiser	Wise
220	May	ICPUG - report of EGM - 10th May 1986	Todd
511	Nov	ICPUG - tie - who is interested?	Kennedy
34	Jan	ICPUG 1980 Compendium - a cache discovered!	
427	Sep	IEEE Interface - Brain Boxes - review	Wise
90	Jan	Index to 1985 Newsletters	Todd
50	Jan	Index to PET articles in old newsletters	Amot
190	Mar	Insurance - club insurance no longer available	Bickerstaff
498	Nov	Keyboard clamp for the disabled	
355	Jul	Letter - 128D and monitor interference	Stewart
560	Nov	Letter - 1541 Physical Exam	Weaver
89	Jan	Letter - 700 user group in US - CBUG	Gibson
86	Jan	Letter - Amateur Radio and the PET	Cachart
87	Jan	Letter - Arrow loader with 4032/8096	Bentley
279	May	Letter - Azimuth 3000	MacFarlane
87	Jan	Letter - Basicode users - any around?	Bentley
451	Sep	Letter - C128-CP/M - AmSoft BASIC	Tanner
89	Jan	Letter - CBUG - 700 user group in US	Gibson
451	Sep	Letter - CCI - warning of slow payment	Picking
191	Mar	Letter - changing 1570 device number	Schofield
354	Jul	Letter - compilers for the C128	Schofield
559	Nov	Letter - Comercopeia - how many comers?	Hunt
563	Nov	Letter - Dialog Software accounts problems	Limb
279	May	Letter - EasyScript & DPS1101 - pound sign	Halliwell
191	Mar	Letter - Flight Simulator - scenery disks wanted	McGow
563	Nov	Letter - formatting MFM disks	Schofield
560	Nov	Letter - GEOS problems	Potten
253	May	Letter - juvenile behaviour - comments on	Todd
191	Mar	Letter - juvenile behaviour on CNet & MNet	Hobbs
87	Jan	Letter - MPS801 - program for descenders wanted	Hoare
278	May	Letter - Oxford PASCAL & Seikosha GP-100VC printer	Molyneaux
278	May	Letter - pre-emptive postage	Harris
279	May	Letter - Printer definition for Star-10C wanted	MacFarlane
191	Mar	Letter - Printlink64/Juki6100 problem	Hobbs
279	May	Letter - Quiet Drive Stop	MacFarlane
355	Jul	Letter - Quiet Drive Stop warning	Stevens
451	Sep	Letter - SoftProm warning	Richards
279	May	Letter - Video Vault - good service	Bumby
42	Jan	Light Fantastic - available on PRESTEL	Grainger

45	Jan	Machine Code Course - special offer	Offler
170	Mar	Machine Code Course and Projects	Offler
71	Jan	Magazines - obtaining some US mags in the UK	Amot
87	Jan	Mains Filters - Consumers Association tests	Kennedy
455	Nov	Mandelbrot set	Syratt
306	Jul	Microtext Teletext Adaptor - mini-review	Paul
100	Mar	Mike's Meanderings - 1541/1570 compatibility	Todd
471	Sep	Mike's Meanderings - Amiga pricing	Todd
469	Sep	Mike's Meanderings - AMIGA software library	Todd
30	Jan	Mike's Meanderings - C128 RGBI output	Todd
100	Mar	Mike's Meanderings - C128/C64 compatibility	Todd
28	Jan	Mike's Meanderings - Commodore and its future	Todd
297	Jul	Mike's Meanderings - Commodore future	Todd
252	May	Mike's Meanderings - Commodore Show 1985	Todd
99	Mar	Mike's Meanderings - Commodore's future	Todd
470	Sep	Mike's Meanderings - disk reliability	Todd
29	Jan	Mike's Meanderings - Epson ribbons - re-inking	Todd
470	Sep	Mike's Meanderings - postal delays	Todd
253	May	Mike's Meanderings - regional groups	Todd
469	Sep	Mike's Meanderings - register of advisers	Todd
403	Sep	Mike's Meanderings - standing down as chairman	Todd
253	May	Mike's Meanderings - teletype 'visual type'	Todd
42	Jan	Modem House - complaints against	Grainger
377	Sep	Modems - 64-MultiModem - description	Grainger
233	May	Modems - 64-Multimodem - review	Todd
350	Jul	Modems - 64-Multimodem - review follow-up	Todd
376	Sep	Modems - Commodore - description	Grainger
378	Sep	Modems - Tandata TM10 - description	Grainger
377	Sep	Modems - Voyager 7 - description	Grainger
322	Jul	Morse and Miniaturization	deGlanville
87	Jan	MPS801 - program for descenders wanted	Hoare
169	Mar	MPS801 - replacement ROM giving descenders	Hoare
473	Nov	Music Expansion System - review	Hoskins
424	Sep	Network News - Casper - advertising system	Grainger
424	Sep	Network News - Ceefax catering for other micros	Grainger
113	Mar	Network News - ClubSpot response frames delays	Grainger
42	Jan	Network News - Gnome bulletin board	Grainger
42	Jan	Network News - Microlink - need for terminal s/w	Grainger
42	Jan	Network News - Modem House - complaints against	Grainger
238	May	Network News - Prestel - ICPUG's involvement	Grainger
538	Nov	Network News - Prestel - new editor appointed	Grainger
423	Sep	Network News - Prestel - tele-shopping	Grainger
424	Sep	Network News - Prestel and PSS	Grainger
41	Jan	Network News - Solely Sixty Four - software	Grainger
113	Mar	Network News - Solely Sixty Four - software	Grainger
424	Sep	Network News - Teletext adapter	Grainger

3	Jan	New members - introduction to ICPUG	Todd
16	Jan	News from Germany	Tilford
90	Jan	Newsletter - 1985 Index	Todd
50	Jan	Newsletter - back issues	Amot
283	Jul	Newsletter - cover competition	
474	Nov	Newsletter - cover competition	
388	Sep	Newsletter - erratic spacing with Wordcraft	deGlanville
504	Nov	Newsletter - how many corners?	Grainger
559	Nov	Newsletter - how many corners?	Hunt
50	Jan	Newsletter - index to old PET articles	Amot
422	Sep	Newsletter - writing for	deGlanville
295	Jul	Newsroom - review	Broad
339	Jul	Open University Computer Courses	Reynolds
525	Nov	Packet Radio and Computers	Harvey
512	Nov	Partner (Timeworks)- brief comment	Kennedy
499	Nov	PASCAL - First Publishing Pascal for C64	Bray
499	Nov	PASCAL - JRT Pascal for C128 (ICPUG)	Bray
500	Nov	PASCAL - Oxford Pascal (C64) problems solved	Bray
425	Sep	PASCAL - Oxford PASCAL - bug '	Bray
425	Sep	PASCAL - Oxford PASCAL - using MPS801/802	Bray
499	Nov	PASCAL - Oxford Pascal for C128	Bray
341	Jul	PASCAL - SIG starting	Bray
341	Jul	PASCAL Corner - 1	Bray
424	Sep	PASCAL Corner - 2	Bray
499	Nov	PASCAL Corner - 3	Bray
168	Mar	PC - changing I/O board	Bickerstaff
81	Jan	PC - colour with IBM colour board + 1901	Bickerstaff
394	Sep	PC - COMAL version 2.01 available	Grainger
274	May	PC - hard disk	Bickerstaff
431	Sep	PC - hard disk - directory analysis	Minter
81	Jan	PC - RAM upgrade price reductions	Bickerstaff
81	Jan	PC Page - 3	Bickerstaff
168	Mar	PC Page - 4	Bickerstaff
274	May	PC Page - 5	Bickerstaff
21	Jan	PC10 & PC20 - re-engineering	
50	Jan	PET - index to old newsletter articles	Amot
514	Nov	Plus4 - CAL/PLUS (spreadsheet) - review	Austin
479	Nov	Plus4 - PlusForth - review	Hunt
475	Nov	Plus4 - word processing on	Hatt
479	Nov	PlusForth - for Plus4 - review	Hunt
342	Jul	Power Plan - review	Morgan
550	Nov	Prestel - ACC and Clubspot	Stuart

424	Sep	Prestel - and PSS	Grainger
538	Nov	Prestel - British Rail timetables	Grainger
550	Nov	Prestel - Gateway using IBM PC XT/AT	Stuart
538	Nov	Prestel - keyword search feature	Grainger
538	Nov	Prestel - new editor appointed	Grainger
163	Mar	Prestel - RSGB pages	Todd
423	Sep	Prestel - tele-shopping	Grainger
18	Jan	Print Shop - coloured graphics on STAR Gemini	Tilford
337	Jul	Printers - Brother CE51 interface problem	Tanner
21	Jan	Printers - Centronics I/face for PET - correction	Potts
440	Sep	Printers - DPS1101 - as a typewriter with C128	Kennedy
129	Mar	Printers - DPS1101 and EasyScript	Longbottom
533	Nov	Printers - MPS1000 - using with the AMIGA	Fowler
260	May	Printers - MPS1000 review	Broad
169	Mar	Printers - MPS801 - descenders - newl ROM	Hoare
87	Jan	Printers - MPS801 - descenders wanted	Hoare
438	Sep	Printers - Quendata - review	Minte
29	Jan	Printers - re-inking EPSON ribbons	Todd
152	Mar	Printers - resolution & readability	Kennedy
501	Nov	Printers - Seikosha SP1000VC with Superscript	Kennedy
501	Nov	Printers - Smith-Corona D200 with Superscript	Kennedy
292	Jul	Printshop companion - review	Broad
23	Jan	Programming Superscript	Kennedy
45	Jan	Projects - 24-way edge connector	Offler
45	Jan	Projects - any feedback?	Offler
170	Mar	Projects - PET	Offler
124	Mar	PROTECT64 - listing & discussion	Grainger
438	Sep	Quendata printer - review	Minte
355	Jul	Quiet Drive Stop - waming	Stevens
141	Mar	Real You - self assessment program - review	Morgan
186	Mar	Regional Groups - Birkenfeld - new address	Amot
70	Jan	Regional Groups - Camberley	Amot
540	Nov	Regional Groups - Canterbury - report	Murray
72	Jan	Regional Groups - COMPLETE LIST	Amot
273	May	Regional Groups - de-affilition of some groups	Amot
273	May	Regional Groups - Dublin	Amot
186	Mar	Regional Groups - Ely - starting up?	Amot
186	Mar	Regional Groups - Ford Dagenham - closed down	Amot
70	Jan	Regional Groups - Gosport	Amot
274	May	Regional Groups - Gosport	Amot
186	Mar	Regional Groups - Gosport - meeting place	Amot
70	Jan	Regional Groups - Leicester	Amot
187	Mar	Regional Groups - London South West	Amot
186	Mar	Regional Groups - London South West - address	Amot
273	May	Regional Groups - Manchester	Amot

71	Jan	Regional Groups - Norwich	Amot
186	Mar	Regional Groups - RAF Valley Computer Users Group	Amot
186	Mar	Regional Groups - Richmond Computer Club	Amot
71	Jan	Regional Groups - Wembley - new organiser	Amot
70	Jan	Regional Organiser - change of address	Amot
540	Nov	Regional Organiser - new organiser	Wise
233	May	REVIEW - 64-Multimodem	Todd
350	Jul	REVIEW - 64-Multimodem - follow-up	Todd
56	Jan	REVIEW - ACOS+ advanced cassette op system	Crowder
165	Mar	REVIEW - Advanced Music System (C64)	Hoare
165	Mar	REVIEW - Alfred Robot Arm	Hoare
217	May	REVIEW - Amiga Handbook	Velleman
458	Nov	REVIEW - AMIGA Superbase	Kennedy
218	May	REVIEW - Blinker - BASIC linker program	Bennett
427	Sep	REVIEW - Brain Boxes' IEEE interface	Wise
50	Jan	REVIEW - CAD Master	Morgan
514	Nov	REVIEW - CAL/PLUS for Plus4	Austin
436	Sep	REVIEW - Calc-electric	Reynolds
446	Sep	REVIEW - Cave of the Word Wizard	Raynor
473	Nov	REVIEW - CBM Music Expansion System	Hoskins
322	Jul	REVIEW - Cooley Morse Tutor (COMAL library)	deGlanville
371	Sep	REVIEW - Data Manager 128	Kennedy
262	May	REVIEW - Diary 64	Wright
48	Jan	REVIEW - Discom-1 disk utilities	Grainger
37	Jan	REVIEW - Entrepreneur	Kennedy
444	Sep	REVIEW - GEOS for the C64	Grainger
306	Jul	REVIEW - Microtext Teletext Adaptor	Paul
260	May	REVIEW - MPS1000 printer	Broad
264	May	REVIEW - Music System	Hoskins
295	Jul	REVIEW - Newsroom	Broad
479	Nov	REVIEW - PlusForth for Plus4	Hunt
342	Jul	REVIEW - Power Plan	Morgan
292	Jul	REVIEW - Printshop Companion	Broad
438	Sep	REVIEW - Quendata printer	Minte
257	May	REVIEW - Quiet Drive Stop	Halliwell
355	Jul	REVIEW - Quiet Drive Stop - waming	Stevens
141	Mar	REVIEW - Real You? - self assessment program	Morgan
284	Jul	REVIEW - SoftProm	Foreman
382	Sep	REVIEW - Super DiskDoc	Griifin
333	Jul	REVIEW - Superdesk	Kennedy
268	May	REVIEW - SuperType	Hoskins
522	Nov	REVIEW - SwiftCalc 128	Wise
167	Mar	REVIEW - Trigsoft UPC1 Cartridge	Medford
442	Sep	REVIEW - Turbo ROM (C64)	Austin
43	Jan	REVIEW - TV screen filter	Morgan
299	Jul	REVIEW - Vizawrite Classic	Crowther
497	Nov	REVIEW - Word Writer 128	Raynor
343	Jul	REVIEW - Xetec Super Graphics Interface	Harris

70	Jan	Round the Regions	Amot
186	Mar	Round the Regions	Amot
273	May	Round the Regions	Amot
540	Nov	Round the Regions	Wise
163	Mar	RSGB - on Prestel & own database	Todd
72	Jan	RUN magazine - obtaining in UK	Amot
266	May	RUNDY! - what it is and why	Bennett
547	Nov	SIG - 1520 plotter group resurrected	Austin
86	Jan	SIG - Amateur Radio group wanted	Cachart
341	Jul	SIG - PASCAL group starting	Bray
284	Jul	Softprom - review	Foreman
451	Sep	SoftProm - warning about Hardworks	Richards
547	Nov	Software library - 1520 plotter	Austin
267	May	Software library - 700 - Liz Deal - disk 7L	Griffin
553	Nov	Software library - AMIGA - preliminary details	Bickerstaff
270	May	Software library - C128 - disk G1	Harrison-Smith
554	Nov	Software library - C128 - disks S1 S2	Harrison-Smith
86	Jan	Software library - C128 - starting up	Harrison-Smith
185	Mar	Software library - C128 - summary	Griffin
177	Mar	Software library - C64 - disks 1 to 10	
267	May	Software library - C64 - disks 11/12	Griffin
269	May	Software library - C64 - disks 11/12	
347	Jul	Software library - C64 - disks 13/14	Griffin
456	Nov	Software library - C64 - H librarian change	
175	Mar	Software library - C64 - how to use	
184	Mar	Software library - C64 - summary	Griffin
55	Jan	Software Library - C64 - volunteers needed	Annal
492	Nov	Software library - COMAL - DIF'EQU corrections	Grainger
249	May	Software library - COMAL - disks available	Grainger
103	Mar	Software library - COMAL - file conventions	Grainger
104	Mar	Software library - COMAL - for cassette users	Grainger
433	Sep	Software library - COMAL 0.14 - disks CT6/7	Grainger
46	Jan	Software Library - COMAL 2.01 - disk UK2	Grainger
250	May	Software library - COMAL 2.01 - disk UK3	Grainger
494	Nov	Software library - COMAL 2.01 - disk UK4	Grainger
433	Sep	Software library - COMAL 2.01 - disks CT6/7	Grainger
270	May	Software library - CP/M - disks CU1/2 CL1 CR1	Harrison-Smith
554	Nov	Software library - CP/M - disks CU3 CL2/3	Harrison-Smith
500	Nov	Software library - PASCAL	Bray
425	Sep	Software library - PASCAL - starting up	Bray

542	Nov	Software library - PC - demos CD1-CD11	Reynolds
448	Sep	Software library - PC - disk 12	Reynolds
345	Jul	Software library - PC - disks 1-11	Reynolds
541	Nov	Software library - PC - disks 1-65	Reynolds
172	Mar	Software library - PC - disks available	Reynolds
81	Jan	Software Library - PC - starting up	Bickerstaff
185	Mar	Software library - PC - summary	Griffin
182	Mar	Software library - PET - disks available	Griffin
267	May	Software library - Plus4 & C16 - appeal	Griffin
551	Nov	Software library - Plus4 & C16 - launch	Hunt
184	Mar	Software library - Plus4 & C16 - summary	Griffin
184	Mar	Software library - VIC - summary	Griffin
382	Sep	Super DiskDoc - review	Griifin
240	May	Super* Corner	Kennedy
325	Jul	Super* Corner	Kennedy
405	Sep	Super* Corner	Kennedy
409	Sep	Superbase - 128 bugs fixed in v2.07	Kennedy
408	Sep	Superbase - 1571 Disk ID Mismatch problem	Kennedy
325	Jul	Superbase - 64/128 to 8096/8296 conversion	Kennedy
407	Sep	Superbase - @-replace problem avoidance	Kennedy
150	Mar	Superbase - adding new fields mid-record	deGlanville
411	Sep	Superbase - Amiga - first comment	Kennedy
458	Nov	Superbase - Amiga - review	Kennedy
244	May	Superbase - C128 version	Kennedy
408	Sep	Superbase - C128D versus C128+1571	Kennedy
61	Jan	Superbase - changing databases - a quick way	deGlanville
240	May	Superbase - collating sequences	Kennedy
16	Jan	Superbase - comments on	Tilford
61	Jan	Superbase - corrupted database	deGlanville
327	Jul	Superbase - database/database transfers	Kennedy
68	Jan	Superbase - date as key field	Barrs
149	Mar	Superbase - date as key field - follow-up	deGlanville
241	May	Superbase - date handling - update	Kennedy
329	Jul	Superbase - dates beyond 1999	Kennedy
61	Jan	Superbase - double quotes - warning	deGlanville
501	Nov	Superbase - economising on record size	Kennedy
240	May	Superbase - listing programs to disk	Kennedy
62	Jan	Superbase - NMAT - using the command	deGlanville
245	May	Superbase - printer control	Kennedy
63	Jan	Superbase - renumbering programs in	Griffin
406	Sep	Superbase - shifted spaces during EXPORT/IMPORT	Kennedy
148	Mar	Superbase - the book	deGlanville
501	Nov	Superbase - the book - ammendment	Kennedy
243	May	Superbase - the book - review	Kennedy
406	Sep	Superbase - unique keys	Kennedy
150	Mar	Superbase - unwanted end-of-page	deGlanville

144	Mar	Superbase - using multiple files	Leighfield
62	Jan	Superbase - writing direct to file on C128	deGlanville
411	Sep	Superdesk - going from SScript to SBase	Kennedy
333	Jul	Superdesk - review	Kennedy
410	Sep	Superdesk - some modifications	Kennedy
405	Sep	Superscript - accounting package	Kennedy
159	Mar	Superscript - auto numbering of paragraphs	Kennedy
330	Jul	Superscript - C128 bugs	Kennedy
244	May	Superscript - C128 version	Kennedy
19	Jan	Superscript - C64 - command reference table	Tilford
20	Jan	Superscript - C64 - STAR GEMINI definitions	Tilford
329	Jul	Superscript - C64/C128 dictionary disk	Kennedy
23	Jan	Superscript - command strings	Kennedy
323	Jul	Superscript - dictionary organisation	deGlanville
501	Nov	Superscript - material recording macros	Kennedy
330	Jul	Superscript - monthly calendar using macros	Kennedy
245	May	Superscript - printer control	Kennedy
23	Jan	Superscript - programming techniques	Kennedy
501	Nov	Superscript - Seikosha SP1000VC printer	Kennedy
160	Mar	Superscript - self erasing macros	Kennedy
161	Mar	Superscript - single char block move bug	Kennedy
501	Nov	Superscript - Smith-Corona D200 printer	Kennedy
522	Nov	SwiftCalc 128 - review	Wise
306	Jul	Teletext, Uncle Derek and me	Paul
152	Mar	Through the Looking Glass - print quality	Kennedy
72	Jan	Transactor - obtaining in UK	Amot
450	Sep	Trigsoft - closed for business?	Bickerstaff
442	Sep	Turbo ROM (C64) - review	Austin
167	Mar	UPC1 Cartridge - review	Medford
353	Jul	USA software - problems running in UK	Bickerstaff
512	Nov	Vizastar 128 - brief comment	Kennedy
303	Jul	Vizawrite - keeping disk directories	McDonald
468	Nov	Vizawrite - keeping disk directories - warning	McDonald
299	Jul	Vizawrite Classic - review	Crowther
55	Jan	Volunteers needed for C64 library	Annal
351	Jul	What we said Five Years ago	Geere
475	Nov	Word processing - Plus 4	Hatt
497	Nov	Word Writer 128 - review	Raynor
388	Sep	Wordcraft's erratic letter spacing	deGlanville
343	Jul	Xetec Super Graphics I/face - review & warning	Harris

ICPUG SOFTWARE LIBRARIES

PET : Joe Griffin, Clovelly, Lynwick St., Rudgwick, Horsham, W. Sussex RH12 3DJ

VIC : Brian Wise, 17 Knighton Close, South Croydon, Surrey CR2 6DP
8050/8250 Joe Griffin - (see PET above)

C64 : Andrew Hartley, 83 Thornton Crescent, Wendover, Aylesbury, Bucks HP22 6DQ

A or D	Kenneth J Hill, 25 Mount Avenue, Rayleigh, Essex SS7 7HS
B	Fred Owens, PO Box 3241, RAF Mildenhall, Suffolk.
C	R Burns, 48 Grasmere Road, Royton, Oldham, Lancs OL2 6SR
E I J K	Mike Hingston, 1 Stafford Road, Eccles, Manchester M30 9HN
F G	Geoff Crowther, 60 Fleckney Rd., Kibworth Beauchamp, Leics LE8 0HE
H	David Miller, 38 Exeter Gardens, Ilford, Essex IG1 3LB
L N O	Nigel Corry, 4 Horsted Way, Rochester, Kent ME1 2XY
M	Ray Medford, 4a South Grove, Brooklands, Sale, Cheshire M33 3AU
PUVXYZ	Bill Hull, Rocklea, Pilling Lane, Preenall, Blackpool, Lancs
Q R T	Peter Crowder, 27 Crawford Drive, Liverpool L15 8AE
S	Brian Wise - (see VIC above)
W	Chris Wright, 37 Cecil Street, Lytham-St-Annes, Lancs FY8 5NN
Germany (including BAOR)	Capt R Harrison, Ord Svcs, BFPO 45
Overseas (other) & 8050/8250	Joe Griffin - (see PET above)

Plus 4 (& C-16) : Richard Hunt 45 Cumberland Rd, Bromley, Kent BR2 0PL

C128 : Tony Harrison-Smith, 150 Moreland Avenue, Benfleet, Essex SS7 4JW

A-C & 8050/8250	Chris Wright - (see C-64 above)
D-J	Damien McEnroe, 11 Pentridge Cl., Eastfield Chase, Cramlington, N'th'bl'd
K-R P	Paul Smith, Egdon House, Nottington, Weymouth, Dorset
S-Z	Bill Gardner, 156 Henwood Rd, Compton, Wolverhampton WV6 8PA
Overseas	Tony Harrison-Smith - (see 128 Organiser above)

PC : Peter Reynolds, 65 Claremont Road, Tunbridge Wells, Kent TN1 1TE

A-D	David Murray, 8 Enticott Close, Tankerton, Whitstable, Kent CT5 3ET
E-O/Catalog	Peter Crowder - (see C64 above)
P-Z/Demos	David Harrow, 28 Phoenix Dr., Wateringbury, Maidstone, Kent ME18 5DR

Amiga : Mike Todd, 27 Nursery Gardens, Lodgefield, Welwyn Garden City, Herts AL7 1SF
Non-ICPUG disks John Bickerstaff (address inside front cover)

COMAL : Brian Grainger, 73 Minehead Way, Stevenage, Herts SG1 2HZ

1520 Plotter : W G C Austin, School of Geography, Faculty of Humanities,
Newcastle Polytechnic, Lipman Building, Sandyford Road,
Newcastle upon Tyne NE1 8ST

Tape copies : John Bentley, 38 Conway Road, Taplow, Maidenhead, Berks SL6 0LD

1571 DISK DRIVE BUG

As previously mentioned in this Newsletter the CBM 1571 double sided disk drive appears to overwrite existing files in certain instances when the disk is more than half full. This would seem to imply it is only reliable when less than 664 blocks out of the 1328 possible blocks are used, effectively rendering it usable only as a single sided drive.

ICPUG, along with various software houses, is in possession of C/128 and 1571 ROM Bug Lists dated 23 September 1986 prepared by Fred Bowen, Senior Systems Engineer at Commodore in the US who originated the C128 concept and developed its architecture and operating system. ICPUG also have a set of the version 3 ROMs on EPROMs developed by CBM in the US which were designed to correct these bugs (but which appear to lead to other problems when used directly with existing 1571 data disks). One of the fourteen items on the 1571 Bug List which is also known as "Release Notes 1571 ROM upgrade to ROM 310654-03" states, "With multiple files open and sectors being allococated (sic) on both sides the BAM swapper mechanism would trash BAM side one. This has been remedied (1571)." As most readers will know the BAM is the Block Availability Map and is the index to all the information stored on a disk. Corruption of or trashing the BAM makes the disk unusable.

ICPUG wrote to CBM (UK) on 24 October 1986 about these problems and by letter of 28 October 1986 CBM (UK) promised a reply as soon as the Technical Manager, Michael Hambly, could discuss the "matter with Mr. Chris Kaday and the Marketing Department within the next 7 days". In their letter ICPUG made an informal proposal to help CBM (UK) distribute new 1571 and 128 ROMS. Unfortunately, no reply was received from CBM (UK).

Meanwhile one ICPUG member wrote numerous letters to CBM (UK) threatening legal action over this 1571 problem. CBM (UK) finally responded to this member's third letter on 29 January 1987, a portion of which reply reads, "Thank you for your recent letter concerning the 1571 disk drive. From your letter it appears that you have been given incorrect information. Commodore has made no statement regarding any problem with the 1571 disk drive. Our products undergo a continuous development process and if as a result of this, any action is deemed appropriate, it will be made public through trade journals, your local dealer, or user groups. Thank you for your support of Commodore."

After receiving a copy of this member's letter from CBM (UK) ICPUG contacted two local trading standards departments. One department in the London area stated that the appropriate office was the Berkshire one as CBM (UK) is located there. However, the Berkshire Trading Standards Department stated that, while in their opinion they could take action if someone advertised the sale of a quart of something while furnishing only a pint, a double sided drive which works only as a single sided one would be outside their purview and any complaints about them should be pursued as a civil action by the parties concerned.

(please turn over)

1571 DISK DRIVE BUG contd

ICPUG is appalled at this state of affairs. If, what Berkshire Trading Standards Department says is true, then the Trading Standards Acts would appear to be rather ineffective and all redress by purchasers of faulty products of this type must ultimately be through the civil court system.

In view of the above, and after taking legal advice, ICPUG should like to advise its members that if, like the general public, they find products unsuitable for the purpose for which they were sold, may wish to consider as one possible option, legal action against the vendor of the goods in their local small claims court. A local consumer advice bureau should be able to assist with these matters.

ICPUG is continuing to explore ways of obtaining upgrade replacement ROMs for 1571 disk drives as well as ones for the C/128. Along these lines unconfirmed information has been received by ICPUG from the US and Australia which indicates that the version 3 ROMs have been abandoned and newer ones are under development. On the other hand, allegedly some or all of the CBM employees in the United States who were most knowledgeable with these ROMs and their development have been made redundant. We must stress, however, that this information has not been confirmed.

We would appreciate if members would keep ICPUG informed of any correspondence they may have on this subject from CBM, local dealers, trading standards departments, the Advertising Standards Authority, local MPs, and the like. All such correspondence should be sent to the Chairman, Jim Kennedy. However, with all the work that this involves it will not be possible for him to reply to each and every letter received, only to build the necessary file for possible future actions on behalf of all members.

We shall keep everyone posted on developments as they become known through the Newsletter.

Copies of correspondence to:

Lt. Col. James M. Kennedy
57 Gunnersbury Avenue
Ealing
London W5 4LP

We apologise for having to place this notice in the Newsletter as a separate sheet, otherwise it would have been delayed until the March/April issue. However, we are all very concerned with these matters and felt all members should be aware of them as soon as practible.